



ATGTTTTCTC	CTGTAGTCGT	CAGTGTGGTA	TTCACAATCG	CCTTCTGCAA
TGCGTCTCCA	GCAAGAGACA	GCTTCGGCTG	CTCTAACAGT	GGGATAACTG
ACAGCGACCG	GCAAGCGTTC	CTCGACTTCC	ACAACAATGC	TCGTCGACGG
GTTGCGAAAG	GCCTTGAGGA	TAGCAACTCC	GGCAAACCTGA	ATCCAGCGAA
GAACATGTAC	AAGCTGTCAT	GGGACTGTGC	AATGGAACAG	CAGCTTCAGG
ATGCCATCCA	GTCATGCCCA	AGCGGCTTTG	CTGGGATTCA	AGGTGTTGCG
CAGAATACAA	TGAGCTGGTC	AAGCTCTGGT	GGATACCCCG	ATCCATCGGT
AAAGATAGAA	CCAACGCTCT	CCGGCTGGTG	GAGTGGTGCG	AAAAAGAACG
GCGTAGGCCC	GGACAACAAA	TACACCGGTG	GTGGTCTCTT	CGCCTTCTCT
AACATGGTAT	ACTCCGAAAC	GACGAAACTT	GGCTGCGCTT	ACAAGGTTTG
CGGCACTAAA	CTGGCGGTTT	CATGCATCTA	TAATGGAGTC	GGGTACATCA
CAAATCAACC	TATGTGGGAG	ACAGGTCAGG	CTTGCCAGAC	AGGAGCAGAC
TGCTCCACTT	ACAAGAACTC	AGGCTGCGAG	GACGGCCTTT	GCACGAAGGG
ACCAGATGTA	CCAGAAACAA	ACCAGCAGTG	CCCCTCAAAC	ACCGGAATGA
CTGATTAGT	CAGAGATACT	TTCTATCGG	TGCACAATGA	GTTTACAGTCG
AGTGTGCCC	GAGGTCTGGA	ACCCGACGCT	CTGGGCGGAA	ATGCACCAAA
AGCAGCTAAA	ATGCTCAAGA	TGGTGTATGA	CTGTGAAGTG	GAAGCATCGG
CCATCAGACA	TGGAAATAAA	TGCGTCTATC	AACATTCTCA	TGGTGAAGAC
AGACCTGGAC	TAGGAGAAAA	CATCTACAAA	ACTAGTGTAC	TCAAATTCGA
CAAGAACAAA	GCAGCCAAGC	AGGCTTCACA	ACTCTGGTGG	AATGAGTTAA
AAGAGTACGG	CGTCGGCCCA	TCCAACGTCC	TTACCACTGC	GTTATGGAAT
AGACCCAACA	TGCAGATTGG	TCaCTACACC	CAGATGGCAT	GGGACACCAC
CTACAACTT	GGATGTGCAG	TTGTTTTCTG	CAATGATTTT	ACATTCGGCG
TTTGTACAGT	TGGGCCAGGA	GGCAATTACA	TGGGTCATGT	CATCTACACT
ATGGGCCAGC	CGTGCTCTCA	GTGTTCCGCT	GGTGCTACTT	GCAGCGTGAC
CGAAGGCTTG	TGCAGCGCTC	CTTAATCAG	TCAACAATAA	ATATCTTA
CAGTGATGTT	GTTGCTTACA	AATTGCTTCT	TTTCCAATAG	AAATACCAAT
GTCAACATCA	CGAGTTTCTT	TAAATTCATC	ACTTCCACTA	CTAGGGGTGA
TTTGAATAAA	ATTTTATTTT	ATAAAGCAAT	TACATCCGCA	AAAAAAAAAA
AAAA				

Figure 1A

MFSPVVVSUVFTIAFCNASPARDSFGCSNSGITDSDRQAF LDFHNNARRRVA
KGLSDNSGKLNPAKNMYKLSWDCAMEQQLODAIQSCPSGFAGIQGVAQNTM
SWSSSSGGYPDPSPVKIEPTLSGWWSGAKKNGVGP DNKYTG GGLFAFSNMVYSE
TTKLGCAYKVCGTKLAVSCIYNGVGYITNQPMWETGQACQTGADCSTYKNSG
CEDGLCTKGPDPETNQQCPSNTGMTDSVRDTFLSVHNEFRSSVARGLEPDA
LGGNAPKAAKMLKMVYDCEVEASAIRHGKNCVYQSHGEDRPGLGENIYKTS
VLKFDKNKAAKQASQLWWNELKEYGVGPSNVLT TALWNRPNMQIGHYTQMAW
DTTYKLGC AVVFCNDFTFGVCQYGP GGNM GHV IYTMGQPCSQCS PGATCSV

Figure 1B

GGTACTGCAGGGTTTAATTACCCAAGTTTGAGACCCAACGCCATGATTTGGCGAACGTGG
CAAGTTCTCGTGGTTCTGTATGCGGCGCTGTCCATTACAGTTGTGAACGCCTATAAACAC
ATTAGCTCCGATCACGTTGTAAATACAACACTGGGTGAGATTCGAGGAGTACCACAGAAT
TTCGAAGGCAAAAAAGTTACCGCTTTTCTTGGTGTGCCATATGGTCAACCACCGACTGGG
GAACTACGATTACGCAATCCGAAAATGGTGCAGCGTTGGGAAGGTATAAAGAATGCTACA
ACACCGGCTCAGCCATGCTTCCACTTCCCTGACAGTAAATTTAAGGGATTTCTGTGGGTCA
GAGATGTGGAATCCGAAAGGAAATATGACCGAGGATTGCTTGAATATGAATATCTGGGTG
CCACACGATGCTGATGGTTCCGTGATTGTATGGATTTTCGAGGCGGCTTCTTCACCGGT
TCACCATCTTTAGATGTTTACAACGGTACTGCTCTAGCAGCCAAGAAACGTACCATTGTT
GTGAACATAAACTATCGATTGGGTCCCTTCGGTTTCCTTTATCTCGGTGATGATTCTCGT
GCACAAGGGAATATGGGACTGCAAGATCAACAAGTTGCATTGCGATGGGTGCATAAACAT
ATAAGCTCCTTTGGTGGAGATCCGAGAAAAGTCACTCTTTTCGGCGAAGCATCAGGCGCT
GCTTCAGCAACCGCTCATCTAGCAGCACCGGGAAGCTATGAGTTTTTCGATAAGATAATT
GGCAACGGTGGCACAATCATGAATAGTTGGGCCAGTGAACAAATACATCGATGCTTGAG
CTGTCAATGAAACTTGCTGAACGGTTGAACTGTACCAAGAAAAGAAAAGACCCGAATACT
GTACATCGCTGTTTGGTTAAACATCCAGCACATGTGGTTCTAAAAGAGGCCGCTGTTGTG
TCGTATCAAATTGGTCTCGTGCTGACGTTTGCCTTCATACCCATTACCTCTGATAAGAAC
TTCTTCCAGGGAAATGTCTTTGATCGTCTACGAGATAAAGACATTAAGAAGAATGTATCC
ATTGTGCTTGGTACTGTAAAAGACGAAGCAACCTTCTTTTTACCCTACTACTTTGGTCAC
AACGGTTTCTCTTTCAATAACTCATTCTTAGCAGATGGGGAAGAAAACAGAGCACTCATA
AATATATCACAGTATAATTATGCGATGAATGCAACTGCGCCATCACTTGAAAGCTCACTG
GAACCACTTTTGAAGCTTATAAGAACGTTTCGACGCGAAAAGAAGAAGGTGAAAGATTA
CGCGATGGTGTGGTTCGATTTCATGGGCGACTACTTcTAtACCTGCAGCGTCATTGATTTc
GCTAATATCGTCTCAGACATTATTAATGGATCTTTGTATATGTATTACTTTACTAAgAGG
TCAGTGGCAAATCCTTGGCCAGAGTGGATGGGTGTAATGCATGGTTATGAAATAGAATAC
GAATTTGGACAGCCTTTCCTAAATTCATCaCTGTACAAGGAAAAGCTTGAAAACGAAAAG
ATcTTCTCGAAAAATATCATGAGCTTTTGGAAAGATTTTCATCAAGACTGGtGTCCCTGTC
GATTTTTTGGCCGAAATACGATCGAAAGGAGCGGAAAGCGCTCGTACTTGCGCAGGAAAGC
GTGAACAATTCTTACCCTAATATGACTAATGTTTCATGGaCCGTACTGTGAACTGATCGAA
GAAGCAAAGGcGTCTACAAATAATGGACTCaCCTTGAAGAAATACATTGAAGGGGAGATA
AAAAATAACGAAACGAACGTATTTTGATAGAATGATTTTGCaCAGAATGAAGAATTGAAT
ATCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Figure 2A

MIWRTWQVLVVLAAALSITVVNAYKHISSDHVVNNTTLGQIRGVPQNFEGKKVTAFLGVPY
GQPPTGELRFSNPKMVQRWEGIKNATTPAQPCFHFPSKFKGFRGSEMWNPKGNMTEDCL
NMNIWVPHDADGSVIVWIFGGGFFTGSPSLDVYNGTALAAKKRTIVVNINYLGPFGFLY
LGDDSRAGQNMGLQDQVALRWVHKHISFGGDPRKVTLFGEASGAASATAHLAAPGSYE
FFDKIIIGNGGTIMNSWASRTNTSMLELSMKLAERLNCTKKRKDPNTVHRCCLKHPAHVVL
KEAAVVSQIGLVLTFAFIPITSDKNFFQGNVFDRLRDKDIKKNVSIVLGTVKDEATFFL
PYYFGHNQFSFNNSFLADGEENRALINISQYNYAMNATAPSLESSLEPLLEAYKNVSTRK
EEGERLRDGVGRFMGDYFYTCVIDFANIVSDIINGSLYMYFFTKRSVANPWPEWMGMVH
GYEIEYEFQPFNLSSLYKEKLENEKIFSKNIMSFWKDFIKTGVPVDFWPKYDRKERKAL
VLGEESVNNSYPNMTNVHGPYCELIEEAKASTNNGTLTKKYIEGEIKNNETNVF

Figure 2B

CTCGTGCCGAATTCGGCACGAGCTCCATTATCATCATGCAGCGATCATTCCTACTTCTACTTGTGTTAGC
AGGTGCCCTGGCCGTAAACACAAACATCCCTCTGAAGCTGATGGGAGGTTTACACCTATGAAATATCAA
TGTGTTGGTAGAGTTTCGGACATTTGGCGGATGTGCTATTTCTGATCGAATCATCCGATATGATTACAA
AATCAGGATTCCGTCAAGTCATCGCATTCATTACGGCGACGACAAAAGATGACAAATCGGTCAGGATGA
AAAGCAGACACGAGTTGGGTTTCATCATACATACGGGGAAGAAACAACTAATCTACGATCTAGATCACTGG
AGGTCAACCGAGAAGCTCAGCGATTAGTGCAAAAAATCCCATACGTAAATCCTCTGGAACAAATATTG
CAGCAGCAATTGCGCTGGCTAACAAAGGTATTCAACTCACCAACACATCGACCGAACGTCCCGAAAAGTGAT
GGTTATTGTCGCTAATGGATTGAAGAAAGGTAGTCAGAAATCCGATTCCCGTTGCGACCGCATTCGAAGGAC
TTTGGAGGTATTATAATAACAATAGAAATACACTCAATACGATAACATTCAGTGCCAAATTTGAAGAAAAAT
TGCTAGCGAAGGATACAAATATTAGAAGCAATGACGAAGATTTTCAGTGTGAGAACGTTAACGAACATGTTG
TTGCAGGCAAAATGTTTCTGTCCAGACCATTACGTTCCATTTCTGTAAATAACCCCTGAATTTGGTTGTTT
CGTAACTGCAAAAAATTCCATCAATGTGGAGGATGCAGCTGAAATGTCCCGCGCGTTGAGGAAGGGAA
ATTAGTGAAAGTAGAGAATGAGGAAAAAGCTGCATTCATCATGAAATTTGGTGGGACCG
AAAAAGGAAGCATGGATTGGATTGAGGTACTATGGGAACAAATCCAGTGGACAGATGGCAGTAAAGCTCA
ATGCAGACGACTTCAACCTGTGGCCCCGAAGATATAAAAGAAATGAATGGACCTCATTTGTATCTATGTA
CCAAGATCAGAAGGACAAAAGTATTATTGGAGAGCCGGTAAATGCCTTGAAGATATGAGATATGTATGC
GAAGTACAGCCATGCAGTGCATCCAACTACTGTCTCGAACCCAGTGTTCATGTATCGTCAGAAAGCATCGCG
CTCTCCTACCAGCACCAACCACCACCAACTAAGATCTAAAAAATCTGTCCAAAAGAGATACCATGA
CATGTACTTTGATTATGTTGAATAGTGTAATTAATCAGAAATGGGGTGTAGTGAATAAAACGTACAACATATT
AAAAA

Figure 3A

MQSFLLLLLVLAGAWAVNTTIPKLMMGGFTPMKYQCVRVSDIWADVLFLESSDMITKSG
FRQVIAFITATTKKMTIGQDEKQTRVGFITYGEEAKLIYDLDHWRSTELKSLDLVQKIPYVKS
SGTNIAAAIALANKVFNSPTRPNVPKVMIVANGLKKSQNPIMPVATAFKDFGGIIITIEY
TQYDNIQVPI LKKIASEGYNIRSNDEDFSVRTLTMLLQANCEFCPDHYVPFRVNNPEFGCFV
TAKIPSMWRDAAEMCRAVEEGKLVKVENEEKAAFIMKLVGPKKEAWIGLRYYGKFKQWTDGT
KLNADDFNLWPEDIKELNGPHCVSMYQDQDKKYYWRAGKCLEDMRVYVCEVQPCASNYCSE
PVFMYRQKHRALLPAPPPPN*

Figure 3B

ggcacgaggg gagatggctc gacttgtatt cctactcgta ctatgtactc tggctgcagc
aagcgttcat cgacgactct ttcataaagc tcgtcgatcat gtgacatcgg tatcgctttc
gcgctcagcca acacttcgtg aacgactgat cgcaagtggc agttgggagg attaccagaa
acaacgctac cattatcgaa agaaaattct agcaaaatat gctgctaaca aagcgtcaaa
gttacaatct gcaaacgaga tcgatgaatt gctccggaac tatatggatg cacaatacta
tgggtgtcatc caaattggga ctccagctca gaatttcact gtgatcttcg acacgggttc
ctcaaatacta tgggtaccgt caagaaagtg tccattctat gacattgcat gtatgcttca
tcatcgttat gactccggag cctcgtcaac ctacaaggaa gatgggcgca agatggctat
tcagtatgga actggatcta tgaaaggatt catttctaag gatattgttt gtattgctgg
aatttgcgct gaagaacaac ctttcgcgga ggctacaagt gaacctgggtc ttacatttat
cgctgctaag tttgatggaa tccttggaat ggcatccccg gaaattgctg ttctcgggtg
aactcctgtc ttccatacgt tcattgaaca gaagaaagt cctagccctg tgtttgcttt
ctggctgaat aggaatccag agtcggaaat tggaggagag attacctttg gtgggttgga
taccgacgt tatgttgaa caattacatg gacaccagt acacgtcgtg gatattggca
attcaaaatg gatattgtac aaggtgggtc atcgtccatt gcgtgtccga atggatgcca
agctatcgct gatactggca cttctcttat tgctggaccg aaggcacagg ttgaggcaat
ccagaaatat atcggagcag agccgcttat gaaaggagaa tacatgattc cttgcgacaa
agtaccatcc cttcctgatg tttcgttcat catcgatggc aagacgttta cactcaaagg
ggaagattac gttctaaccg tgaaagccgc tggtaaatca atctgtttgt ctggcttcat
gggaatggac ttccagaga agatcggcga attgtggatc cttggagatg ttttcattgg
aaaatactac accgtcttcg atgttggtca ggcacgtgtt ggatttgctc aagcaaagtc
agaagatgga ttccctgttg gcacccccgt tcgaacattc agacagcttc aggaagacag
cgatagcgac gaggacgatg tatttacttt ttaagtagtg ttaacatctc caacgtgctc
tgttacttct acgtgtacca tgtttcacgt gtttgctcat ttgataaatt attatcttcc
ct

Figure 4A

MARLVFLLVLCTLAAASVHRRLFHQARRHVTSVSLSRQPTLRER
LIASGSWEDYQKQRYHYRKKILAKYAANKASKLQSANEIDELLRNYMDAQYYGVIQIG
TPAQNFTVIFDTGSSNLWVPSRKCPFYDIACMLHHRYSYGASSTYKEDGRKMAIQYGT
GSMKGFISKDIVCIAGICAEEQPFAEATSEPGLTFIAAKFDGILGMAFPEIAVLGVTP
VFHTFIEQKKVPSPVFAFWLNRNPESEIGGEITFGGVDTRRYVEPITWTPVTRRGYWQ
FKMDMVQGGSSSIACPNGCQAIADTGTSLIAGPKAQVEAIQKYIGAEPLMKGEYMI PC
DKVPSLPDVSFIIDGKTFTLKGEDYVLTVKAAGKSICLSGFMGMDFPKIGELWILGD
VFIGKYYTVFDVGQARVGFAQAKSEDFGFPVGTPTVRTRQLQEDSDSDDDVFTF

Figure 4B

ggcacgagag aatgcgttcg atactcgtgt tgggtggctct gatcggatgc attgctgcgg
gtgtatataa aatcccattg aaaagaatca ctccgccgat gataaaaatg ttgagagctg
gtacttggga aacgtacgta gaaggaatga ggaagagaca attacagtta ctgaaggagc
acaaggttca tatccaagat gtactcggct atgctaacat ggagtacctc ggcgaaatta
ctattggaac tcctcaacag aagtttctgg tgggttttga cactggctcc tcgaatctgt
gggtccctga tgattcatgc tacaaggaga agagacctga tagatgtcta gtatcaaact
gtgatgctgg actggtttgt caagtcttct gtccagatcc taaatgctgt gaacatacga
gagaattcaa gcaagtaaac gcatgcaaag ataagcatcg atttgatcaa aagaattcca
acacttatgt taaaacaaac aaaacatggg caatagcgta tgggaactgga gatgcgaggg
gatttttttg aagagataca gtccgttttg gtgctgaagg aaaggatcag ctcgttatta
atgatacgtg gttcggacaa gcagagcata tagctgaatt tttcagtaat actttccttg
atggcattct cggactcgtt tttcaagaac tgtcagaagg aggcgtcgtt cctccaataa
ttcgtgccat tgaccttgga cttctcgatc aaccaatatt tactgtctat ttcgaaaatg
tcggagacaa agaaggtggt tatggaggtg ttttcacctg ggggtggtctc gatcccgatc
attgcgaaga tgaggtcaca tatgaacagc taaccgaagc aacttactgg cagtttagac
ttaaaggagt gtcgtctaag aacttctcgt cgacggctgg ttgggaagca atatccgaca
ctggtacctc gttaaatgga gccctagggt ggatactaag aagtattgca agacagtata
atggacagta cgtcgcctct caaggtctct acgtcgtcga ctgcagtaaa aatgtgaccg
ttgacgtgac cattggcgac agaaactaca ctatgactgc gaaaaatctc gtacttgaaa
tacaggctga tatatgtatt atggcatttt tcgaaatgga catgttcatt ggaccagcat
ggattcttgg cgatccattt attcgagaat attgcaatat tcatgacatt gaaaagaagc
ggattgggtt tgcagctgta aaacattgat cgattataaa tgtaatgggc tatttgtcat
aaattgctca ataaagtttt ttgactaaaa aaaaaaaaaa aaaaaa

Figure 5A

MRSILVLVALIGCIAAGVYKIPLKRITPPMIKMLRAGTWETIVE
GMRKRQLQLLKEHKVHIQDVLGYANMEYLGEITIGTPQQKFLVVLDTGSSNLWVPDDS
CYKEKRPDRCLVSNCDAGLVCQVFCPDPKCCEHTREFKQVNACKDKHRFDQKNSNTYV
KTNKTWAIAYGTGDARGFFGRDTVRLGAEGKDQLVINDTWFGQAEHIAEFFSNTFLDG
ILGLAFQELSEGGVAPPIIRAIDLGLLDQPIFTVYFENVGDKEGVYGGVFTWGGLDPD
HCEDEVITYEQLTEATYWQFRLKGVSSKNFSSTAGWEAISDTGTSNLGAPRGILRSIAR
QYNGQYVASQGLYVVDCSKNVTVDVTIGDRNYTMTAKNLVLEIQADICIMAFFEMDMF
IGPAWILGDPFIREYCNHDIKKRIGFAAVKH

Figure 5B

AGCATATCAGC**ATGAGAGTCGCTATTGTTTTTCATTGCATGCTTCGCAGTA** 50
GCACACGCATGCAAGTgCGAAAAGAAACCTCGTCCTCCATTGGAGAAACT 100
GCTTTGCCAATCACAATTTGTTACTCACGCGAAAGTGACGAAGAAGAGAA 150
TTGATGGTTACTTCATCTATTACGACTTGGAGCATAAGGaAGTTTATAAG 200
CCCAAAGATAGGAGTATCCCAATCGAACTCTTCTCATGGAGGGAAAAGGA 250
AAATTGTGGTGTTCGGATCTCGAAGAAGGCAAAGAATACCTGATAGGAG 300
GTAAAGTGACGGATTATGGCGACGGTGATTTGGTAATTTCTGTTTCACGG 350
TGCGACCTTCTCCGAAACTGGACAGACGTCTCTGGAGAGGAGAAGAAATT 400
GCTCGGAACGTTCAAATGTGAAAATCAGTCATAAACGCCGATTATATATA 450
ATTGAaAGAAGAGAAATGAACATTTTTTCACGCGAAAAAAAAAAAAAAAAAA 550
AAAAAAAAA 559

Figure 6A

M R V A I V F I A C F A V 13
A H A C K C E K K P R P P L E K L 30
L C Q S Q F V T H A K V T K K R 46
I D G Y F I Y Y D L E H K E V Y K 63
P K D R S I P I E L F S W R E K E 80
N C G V P D L E E G K E Y L I G 96
G K V T D Y G D G D L V I S V S R 113
C D L L R N W T D V S G E E K K L 130
L G T F K C E N Q S* 140

Figure 6B

GTGGTTTTCAAAGCTCTCACATGGCTTAAATTAACGAGAACAAAGATGACTCATCACCGGCTCCGAAGATATGGAATGTGGGAGAGCAAGATAATACACCCGTGCTGACAAAATTTGTTAGTTTGGAAAAAGAGGAGTTAGCAGCAAAAGTTGAAGAAAACACCATATGAGGAGGTGGATGAGCAAAACAGTTTAGACAAATCGTCGGTTATGAAACTCAGGAATATCAAAAATGCCCTGTTCACTCCAATAGAACCAAGTAGCCTCAGCGTTGCCTCATTGCGTGTGAATGACCCGAAATATTGTCCGAGTTACGGTGAAACCGGATAAGAAATATGCCATATCAGGAAGCAGCATCTATCTTCTCAGTGGTCTGGATCAGACTGTAGATCCATGCGAGGATCTCTATGCAATCAACCTGTAATACGTACCTCAGAAATCACAACGCCACCGACATTGGCGTGAAACCGAATCGGAACGTACAAAAGCGCTCAAGATGACGTGAACGCTGAAATCGGTGAAGCACTCGAAGAGTTAACGTGAGCGACACAAAGTGGTTCGGAGACGGAGAGGCTTCTTATAGAGATGAGAGACTTCTTTCACATGTTACACCACTCGAGCGAGGAAACCCATAGACAAATTCGAAGAACGTTCTTATGATATAATGGGAAAGTTCGAGCAGAATCATGCGATGGTCCATTCTCGGAGCAATGGTCTCGGTGCAATTCGAAGATGTGAACAAACACTCCTTATCTTATCGCAGCCCTATCTTCCAAATGGCTCGAGATGTCGATGGCATCGTGGCCAGAGAGTGAACCTGAGGAACTACGCACACAGCACAATCCACGCACTTTGAATCAGTTGAAAGCAGCGTATCCAGCGATTAAATGGGACAGTTATTTCAATGCTCTGCTCTCTCTGTGCGAGGAGTCGATATGAATAGGCAGAACATCATACTTACCCAACCATCGTACTTCGGCTGGTTAAATGCTCTCTTCAACCGTGGCGCAGATGACAAAACCATTCGGAATTATCTTCTGTTCACTGATTTCTCGAGGAGGCTGATTTCCCTTGGTGGAGCACTTAAACGATGTTCAAAAATCTGATTATGTTCCATATGCTTAGGAAGAGGAAAGGAGTCACAAAGATTGGCCAGCACTTAAACGATCACATGACGACTGTTGAGGATGCAAAACATACAGTCTTGAACAGCATGATGACGTATATGCCATTTGGACCAGGTTACGTGTACGTGAAATCAAGGAAGAACAGAGATGACGTTGTCAAGGACATAGACACCAAGCAGCGTGTCTTCAAGAATCTTGTGAACATGATTTGTTAACTTAAATTGGATGACAGACGCATCTCTGGAGCTGCCATGAGAGAAAGCTGATACGATGGTGAAAACTATGGATGGCCCAAGGATTTGTTGGAAATTCAGGATAGTAGCAAGATTGATGCTTATCACAAGAAGGATTATGGTAACATCATTAACCTGTACAAGGAGAACATTACTCATAACTACTACCACATCCGAGAACTATGATCAAAAGGCTATTCCAACCATGAATCGCTGCGATTGCTGACTGAAGCGCCGAAAAGGACCACCTTCTGTTGTCAACCCGCTCTGGTGAATGCTGGTACATACCCGAGAGAAACTCCATCGCATTCCTTACGCCCTCTGGAATCCACCTATTACAATTACGAATATCCTCAAGATGCAACTACGCTGGTCAAGGTGGAACTGCTGGCCACGAATTAGTGCATGGATTTCGATGACCCAGGAGTACAGTTCTGCTCCGACGGAAGCCTTAGCGACTGCACGTGGATCGAGTGTGGATGGTTGGAAGAGAAAGTCCAAGAAAGGATTCAGTGAATATGGCACAAATGTGTGTACACACAGTATAGCACCAATGCTGCCCTCAGACAGGTGGGTCAACCACTGCGCTAATGGAGCGACCAACCAAGGAGAAAACATCGCCGATCTTGGAGTCACTGGCAGCATATCGAGCCTACCGTGAATACATCACCAAGGAAAGAGGAGGAGAGAGACTGCCGGGATTGGAGCAGTACACACCAATCGAGCTTCTTGGATAACATACGGATAATTCTGTGTGTCATGAGCCAAACAGATAGCAGTCTATTAGACAACTCTTGACCGATGTTCACTCACCTGGCTCATGCCGTGTTAACCAAGTCATGCAAGATATTCCGGAAATTTGCACTCGATTTTCGGATGTACAATGGGCCAGAAAGATGATCCAGAGCCTGAGCAACGATGTCCGGTTTGGGTAGCAGAAATAAATGTTCGAAAATGGACCGTCAGATCTCATGTTTTCACGTGAATATGACGCTCTTAACGTAGGTTTTTC

Figure 7A

MAKLLLEVTTGLVVLLGVLGVISVVFNVLTWLKLNENKDDSSPAPKIWNVG
EQDNTPLVLTNLLVLEKEELAALKKTPYEEVDEQTVRQSSVMKLRNIKNA
LFTPIEPVASALPPLRVNDPKYCPSYGEPAKKYAYQEAASYLLSGLDQTV
DPCEDLYAFTCNTYLNRHNATDIGVNRIGTYKDAQDDVNAEIVEALEEVN
VSDTKWSETERLVKATLFTCVHHTRARKPIDNSKNVLIEMRDLFGGIPFL
NHTLKKDIDFFDIMGKFEQNHAMGTLLGAMVSVDKKNVNKHSFLSQPYL
PMARDFYVFPQHTKMVENRVSLINSVLRSFAEAVLDDPSPYLDLMSRSAR
DVVKLEMQIAMASWPESELNRNYAQQHNPRTLNQLKAAYPAIKWDSYFNAL
LSSVQGVDMNRQNIILTQPSYFGWLNALFNGGADDKTIANYLLVHLILEE
ADFLGGALKTMVQKSDYVPYALGRGKGVTRVGQQLTRSHDDTVEDANIQC
LNSMMTYMPFGPGYVYVKSRRNRDDVVKDIEHQTELVFKNFVNMIGNLNW
MTDASLELAMEKADTMVKNYGWPCKDLFGNFRDSSKIDAYHKKDYGNIINL
YKENITHNYHHIRRTMIKGYSNHESLRLLTEAPKRDHFLLSPALVNAWYI
PERNSIAFPYAFWNPPYYNYEYPQACNYAGQGGTAGHELHVGFDQGVQF
AADGSLSDCTWIECGWLEEKSKKGFSDMAQCQVVTQYSTQCCPQTGGVTHC
ANGATTQGENIADLGGQLAAYRAYREYITKERGEEEEKRLPGLEQYTPNQI
FWITYGYSWCMSQTDSSLIRQLLTDVHSPGSCRNVNQVMQDIPEFALDFGC
TMGQKMYPEPEQRCPVWVAE*

Figure 7B

GGGTTTAATTACCCAAGTTTGAGGATGAGGGTACTCCTGTTACTGCTACTTTTATCCATT
TGCGCGAGCGCTGGCTTTCTAGACACTAAATTCGGCCAGAAGATAAAGAAAACCTTTGAC
AAGATTAAAGCTGTGCTTAACGGCACTGCACTCATCGCGATTTCGTGAAAAATTCATTGCA
CTAAGGGAAAAAATAAAGCAAAGCTGACGCTCTCTCCAGCACGAAAGGCTATATTGGAC
GAAGTTATGAAGCaTATCAAAATGATCAAAAAGGATAAGATTCAAGAGAAGGGCGACTCA
ATCGATGAAATCAATGAAAAGAGTGCAATCGGACAGTTGCTGTACCAGGGTGACATCGTT
CTGACAGAAAAGCAAGCCCAGCAAATTACCGAAGACATTGAAAATGACAAAGGCGACCGC
GAAAAACGACAGGCGTTCCGTGATCGCAATTATCCGCGAACATTATGGTCTGAAGGGAGTG
TACTTTCACTTTTCATAGGAACGCAACTCCTGAAGTTAGAAGCGTTTTTGTGAAAGGCGCA
AACTTTGGATGAAGGATACTTGCATCGACTTCTTCGAAAGCAACTCAGCGCCTGATAGG
ATTCTGTGTGTTCAAAGAGAACGGATGTTGGTTCGTACGTTGGTAGGCTGGGCGGTGAACAA
GATCTGTCACTGGGAGAAgGTTGTCAATCGGTTGGCACAGCTGCGCACGAAATTGGCCAC
GCTATTGGCTTCTACCACACTCACGCAAGACATGATCGCGATAACTTTaTTACATTCaAC
GCACAAAATGTCAAGCCCGATTGGTTGGACCAATTCCTCTTCACTCTTCACTCCGGCAACGAAT
GAGAACTATGGAATAACTTACGACTATGGAAGTATCATGCATTATGGTGCAAATAGCGCC
TCGCAGAACGGACGTCCTACAATGGTTCCGCATGATCCCAAATACGTAGAACTCTTGGA
TCACCCATAATTtCCTTCTATGAGCTTCTCATGATCAACAAACACTACGACTGCACTAAG
AACTGTGACCCGGCTACTTCTGCGCAGTGTAAGATGGGTGGCTTCCCACATCCTCGGGAT
TGTACAAGATGCATTTGCCCTAGTGATATGGAGGCAAACTGTGCGACCAGAAGCCAGCC
GGATGCGGATCTATATACcAGgCCACCAATCAGTACCAGACCTTGCACGACGAAATTGGA
GACAAGAGAGCGGGACAGAGACCTAGAGAAGACATGGACTTCTGCTATTATTGGATCACG
GCCCCAAAAGGTTCAAAAATCGAAATCAAATTGCTGGATTATCACAAGGAGCCGCTGTT
GAAGGATGCCAGTACTGGGGAGTAGAAATCAAGACTCATGCCGATCAACGTCTTACCGGC
TACAGGTTCTGCGCACCAAGATGTTGGAGTTAGATTAGTGTGCAACTTCAACATCGTA
CCAATAATCACATACAACATATTCTACGCGACCTATGTCGATATTCAGTACCGTATCGTT
GGTGATAATGTTGGCGGTCCTATGCCTCAGCCACAACCAAATAGCAATTGTGTGCGACAAT
GAACAGTGTGCGACACTCGTGAGAACAAAGAACTTCTGTGAGAGCAGATTTTTTACAGAG
TCCGTCaAAAGAGGTTCTATGTCCAAAGTCCAGCGGTTTCTGTGCTAACTTTTACAGCAA
CAATGGAATAAATGTTGCACCATAAAAAAAAAAAAAATAAAAAA

Figure 8A

MRVLLLLLLLSICASAGFLDTKFGQKIKKTLDKIKAVLNGTALIAIREKFIRLREKIKAK
LTLSPARKAILDEVMKHIKMIKKDKIQEKGDSIDEINEKSAIGQLLYQGDIVLTEKQAQQ
ITEDIENDKGDREKRQAFRDRNYPRTLWSKGVYFHFHRNATPEVRSVVFVKAKLWMKDT
IDFFESNSAPDRIRVFKENGCSYVGRGLGGEQDLSLGEQCQSVGTAAHEIGHAIGFYHTH
ARHDRDNFITFNAQNVKPDWLDQFTLQTPATNENYGITYDYGSIMHYGANSASQNGRPTM
VPHDPKYVETLGSPiISFYELLMINKHYDCTKNCDPATSAQCKMGGFPHPRDCTRCICPS
GYGGKLCDQKPAGCGSIYQATNQYQTLHDEIGDKRAGQRPREDMDFCYYWITAPKGSKIE
IKIAGLSQGAAVEGCQYWGVEIKTHADQRLTGyRFCAPEDVGVRLVSNFNIVPIITYNIF
YATYVDIQYRIVGDNVGGPMPQPQPNsNCVDNEQCATLVRTKNFCQSRFFTESVKRGLCP
KSSGFCR*

Figure 8B

```
ATGTTTTTAC CTGTAATcGT CAGTGTGATT TTCACAATCG CCTTCTGCGA
tgcgtctcca gcaagagacG GCTTCGGCTG TTCAAACAGT GGGATAACTG
ACAAGGACCG GCAAGCATTC CTCGACTTCC ACAACAATGC TCGTCGACGG
GTTGCGAAAG GCGTTGAGGA TAGCAACTCC GGCAAACTGA ATCCAGCGAA
GAACATGTAC AAGCTgtCAT GGGACTGTGC AATGGAACAG CAGCTTCAGG
ATGCCATTCA GTCATGCCCC AGCGcgTTCG CTGGAATTCA AGGTGTTGCG
CAGAATGTAA TGAGCTGGTC AAGCTCTGGT GGATTCCCCG ATCCATCGGT
AAAGATAGAA CAAACGCTCT CCGGCTGGTG GAGTGGTGCT AAAAAGAACG
GCGTCGGCCC GGACAACAAA TACAACGGTG GCGGTCTCTT CGCCTTCTCT
AACATGGTAT ACTCCGAAAC GACGAAACTT GGCTGCGCcT ACAAGGTTTG
CGGCACTAAA CTGGCGGTTT CGTGCATCTA TAATGGAGTC GGGTACATCA
CAAATCAACC TATGTGGGAG ACAGGTCAGG CTTGCAAGAC AGGAGCAGAC
TGCTCCACTT ACAAGAACTC AGGCTGCGAG GATGGCCTTT GCACGAAAGG
ACCAGACGTA CCAGAAACAA ACCAGCAGTG CCCCTCAAAC ActGGAATga
ctgattcagt cagagatact ttcctatcgg tgcacaaatga GTTCAGGTCG
AGTGTTGCCC GAGGTCTGGA ACCCGACGCT CTGGGCGGAA ATGCACCAAA
AGCAGCTAAA ATgCTCAAGA TGGTGTATGA CTGTGAAGTA GAAGCATCGG
CCATCAGACA TGGAAATAAA TGCGTCTATC AACATTCCCA TGGCGAAGAC
AGACCTGGAC TAGGAGAAAA CATCTACAAG ACTAGTGTAC TCAAATTCTGA
TAAGAACAAA GCAGCCAAGC AGGCTTCACA ACTCTGGTGG AATGAGTTAA
AAGAGTTCGG CGTCGGCCCC TCCAACGTCC TTACCACTGC TTTATGGAAT
AGACCCGGCA TGCAGATTGG TCACTACACC CAGATGGCAT GGGACACCAC
CTACAACTT GGATGTGCAG TTGTTTTCTG CAATGATTTC ACATTCGGTG
TTTGTACAGTA TGGGCCAGGA GGCAATTACA TGGGTCATGT CATCTACACT
ATGGGCCAGC CGTGTTCTCA GTGTTCGCCT GGTGCTACTT GCAGCGTGAC
CGAAGGCTTG TGCAGTGCTC CTTAATCAGT TCTTAACAAT GAATATCTTA
CAGTTGAAAA AAAAAAAAAA AAAAAAAAAA
```

Figure 9A

```
MFSPVIVSVIFTIAFCDASPARDGFSGNSGITDKDRQAFLEDFHNNARRRVAKGVEDSNS
GKLNPAKNMYKLSWDCAMEQQQLQDAIQSCPSAFAGIQGVAQNVMSWSSSGGFPDPSVKIE
QTLSGWWSGAKKNGVGPDKYNGGGLFAFSNMVYSETTKLGCAVKVCGTKLAVSCIYNGV
GYITNQPMWETGQACKTGADCSTYKNSGCEGLCTKGPDPVPETNQQCPSNTGMTDSVRDT
FLSVHNEFRSSVARGLEPDALGGNAPKAAKMLKMVDCEVEASAIRHGKNCVYQHSBGED
RPGLGENIYKTSVLKFDKNKAAKQASQLWWNELKEFGVGPSNVLTALWNRPGMQIGHYT
QMAWDTTYKLGCVVFCNDFTFGVCQYGPGGNYMGHVIYTMGQPCSQCSFGATCSVTEGL
CSAP*
```

Figure 9B

cGACACAACCAACGATGTTAGTTCTTGTACCACCTTTTGGCTCTCTTGGCTGTTTCTGTTTCATGGAAATTCCTATGA
GATGCGGAAATAATGGAATGACCGACGAAGCCCGGCAGAAATTCCTCGACGTGCACAAACAGTTACAGATCTATGG
TTGCCAAAGGACAGGCAAGGATGCAATTTCCGGGAAATGCTCCGAAGGCTGCCAAAATGAAGAAAATGATCTACG
ACTGCAACGTCGAATCAACTGCAATGCAAAATGCGAAAAAATGTGTTTTCGCCCATTCGCACAGGAAGGGAGTTG
GCGAAAAATATTTGGATGTCGACTGCGCTCAGATGGACAAAGCACAAAGCTGCTCAACAGGCTAGTGACGGTTGGT
TCAGTGAGCTTGCGAAGTATGGTGTAGGCCAGGAAAAACAAGCTAACACGAGTTGTGGAATGGTGTTCATCGATGA
TAGGACATTACACTCAGATGGTCTGGCAGGAGTCTACAACTCGGATGTTATGTGGAATGGTGTTCATCGATGA
CCTATGGTGTCTGCCAGTACAGTCTCAGGTAATATGATGAACCTCACTCATCTACGAGAAAAGAAACCCCGTGCA
CAAAAGACTCTGACTGTGGCTCGAACGCCAGTTGCAGCGCTGGGGAGGcgCTTTGCGTcTgTGCGTGGCTAgCTGG
ACATTTCCCaACGTACAACACAGCGTTATagTTAAATGCaACTTTTCTtTTCATCtTAtTGAgTAAAGGcatTGA AAAACa
aaaaaaaaaaaaaaaa

Figure 10A

MLVLVPLLLAVSVHGNMRCGNNGMTDEARQKFLDVHNSYRSMVAKGQAKDAISGNAPKAAKMKMIY
DCNVESTAMQNAKKCVFAHSHRKGVGGENIWMSTARQMDKAQAAQQAASDGFSELAKEYGVQENKLTTLW
NRGVMIGHYTMVWQESYKLGCVVEWCSSMTYGVCQYSPQGNMNSLIYEKGNPCTKDSDCGSNASCAG
EALCVVRG*

Figure 10B

ATAAGACAGCAATGAAGTCCTATCTTGTGATATCAGCTGCGATCCTCGGCATTGCTTA
TGCCGATGCTGATTATTCCAAGTGCCCGCAAAATGAAATAATGAACAACGATATGAGG
GAAAAAGTTACGGACATGCACAACGCCTACAGATCCAAATTCGCACGGGATCATCAAG
CTTCGAAAATGAGAAAATTGGTTTACGACTGTGCCATCGAAAAAGGAATCTACGAGTC
GGATACCAAGTGCGAGATGAAACCATCGATGGAGGAGGAGAACGTAGAAGTTATCGAC
GGCAACAGCGATGATCTCACTGTTATTTTCAGAGGCCGGTAATTCGTGGTGGAGCGAGA
TTTTGGACCTGAAAGGAAAGGATGTGTACAACCTCCGTGGACAATACATCGGAAATTGC
CAATATGGCTTGGGAAAGTCATGCGAAACTTGTTGCGCAGTTGTTGAGTGCTCCAAG
AAAACCCATGTAGTCTGCCGATACGGACCGGAAGGAAAAGGTGAAGGAAAGAAAAATTT
ACGAAAAGGGCGAAAACATGCTCACAATGCAGTGATTACGGACAAGGTGTCACCTGTGA
CAATGACGAGTGGGAGGGATTACTCTGCTCATAATATTGGAAAAACATATGTGGATGA
TGATGTTTCGCAATAAATAAATCAATTACAAAAAAAAAAAAAAAAAAAAA

Figure 11A

MKSYLVISAAILGIAYADADYSKCPQNEIMNNDMREKVTDNMHNAYRSKFARDHQAS
KMRKLVYDCAIEKGIYESDTKCEMKPSMEEENVEVIDGNSDDLTVISEAGNSWWSE
ILDLKGKDVYNSVDNTSEIANMAWESHAKLGCAVVECSKKTHVVCRYGPEGKGEK
KIYEKGETCSQCSDYGQGVTCNDDEWEGLLCS*

Figure 11B

AGAACATGATCAACATCCATTTTCATAGCGCTTGCCATAACCTCTCTTTTGCCTGCCCTAT
CCGAAGGGAAACCGGTCGTATTTGTTGAACCACAGTGTAAGCCGAATGGTTACCTACACA
AGAATACAATCGACAACAATGTTCTTAAGCCGATAAATACTCGTCGAGAGGCTCTGGCCA
AGGGCACGCAACAGAATGGCTTTGACCCACCAAAACCCACAAACATTCTTGCCACCAGCGA
CGGACATGACTAAACTGAGTTGGAGTTGTGATCTTGAGCAGAAGGCTATAAAAACTATCA
ACGGTAACTGTGTGAATCCGGCAAACCCAAACCAACCGAATAACGGCGAAGGATTGGCAG
ATGTCCTCTACTACGGCAACGACTATGATAACACGGTCGAAGGAGTGATCCAAGGCAATC
TCGAAGCTTGGCTGGTAAAAGCCGATTTCAATGTATTCCCTGTTACCACAAAAGGTACCG
TCATTAGCTATCCCACTTACAATGGCAACACAGATCTCTTGGCATACTCTAACTTAGTCC
GGCCTACCAATACTGAGATAGGATGTGTACTGGAAAGATGTCCAGCTACAGCCAATGTTT
CAAAGCTAGTCACGTTCTACTGTATTTTGAATGGAAAAATATCACCAACGGAGAGGCTC
TCTATAAGGGCACAACTGTGAATACCGGAGGATGCAAAGAGGTCACATGCTCAGCGGGAT
ATGCCTGTAACAACGCCACCTTGCTATGTGAACGTAGTGCGACAACAAGCTCATCTACAT
CGGCAAGCACATCTTCATCAACAGCTTCCTCAACAAGTTCATCTATGGCAATAAGCACAT
CTTCGTCAACAAGCGCATCTGGGGCAACAACAACAAAAGCTCCTTCTCCGCAAGCGCAAT
TCCCCACAGGGACTAGCACTATGTGCAATACCAGGCATGCCTATGCTAACAGGATGACCG
ACAATCTCAGGAATGAATACGTAAGGCTGCACAACCTCCGAAGAGGCTTACTCGCAAAGG
GAGAAATTCCTCAGAAGGGTAACATATACCTACCAAAGGCGGCTGACATGTGAAAATTA
GTTACGACTGCGGCCTGGAACAAGGAGCCATAGAACACGCAAGCCAGTGTCTCACAGGAG
GGTCCGGACAAAGCTCGAGACCAGGTGTGGGAGAGAACTTTAAAGTGATCCCAGCGGCAA
GATTTCCGACTTTTCGAAGATGCAGCAAAAAAGACCGTTACTGAATGGTGGAAGCCGATTC
GTAACGTGGACTACTTCGGAACAACGTCAACTTCCTCCCCATCTATGACCAAGACCCGA
TATCCTCCTTTACCCGGATGGCATGGGCCACAACCTAACAAGGTGGGGTGCTCTATCGTAA
AGTGCAACAACGGACAACGTATACGTAGGCGTGTGCCGATATAGTCCAATGGGTAACATTG
TGAACAGCAACATCTACCAAATTGGGAATCCCTGCAGTGTGAGACCTACTCAAGCGACCG
GGTGTGACCCAGTCGAGGGATTGTGGTACTAGGCGCACTTTTCCGCACTGAATGGCGATT
CTGTTTTGAATTTTTGAATATTACATTAATGGATGTTAACAATGGGTCCCTTAGTTTTCT
GTTGTTAACAAGGGTGGTTAGATTGGATTGGGAATAAATGATGCAATCGCCAAAAAAA
AAAAAAA

Figure 12A

MINIHFIALAITSLLPALSEGKPVVFVEPQCKPNGYLHKNTIDNNVLKPI
NTRREALAKGTQQNGFDPPNPQTFLPPATDMTKLSWSCDLEQKAIKTING
NCVNPANPTKPNNGEGLADVLYYGN DYDNTVEGVIQGNLEAWLVKADFN
FPVTTKGTVISYPTYNGNTDLLAYSNLVRPTNTEIGCVLERCPATANVPK
LVTFYCILNGKNITNGEALYKGTTVNTGGCKEVTCSAGYACNNATLLCER
SATTSSSTSASTSSSTASSTSSSMAISTSSSTSASGATTTKAPSPQAQFP
TGTSTMCNTRHAYANRMTDNL RNEYVRLHNFRRGLLAKGEIPQKGNIYLP
KAADMWKISYDCGLEQGAIEHASQCLTGGSGQSSRPGVGENFKVIPARF
PTFEDA AKKTVTEWWKPIRNVDFGNNVNF LPIYDQDPISSFTRMAWATT
NKVGC SIVKCTTDNVYVGVC RYSPMGNI VNSNIYQIGNPCSVRPTQATGC
DPVEGLWY*

Figure 12B

ATACTACTGCAGTGTGCGTTTAGGAGAACTCTCACTGCATCGAAAATGCCGAATCTACTC
CTGCTGCTGTTTCTCTCGCTACCAGGAGCGATTCTTCAACCACTTGTCAGGAAATGAT
CTAACAGATGCTGAACGCACACTGCTAACTAGGGTGCACAATTCCATTTCGACGGGAAATA
GCGCAAGGAGTTGCAAACAACCTACCATGGTGGTAAACTGCCTGCTGGAAAGAACATATAC
AGGATGAGATACAGCTGTGAGCTGGAACAGGCTGCTATTGATGCTAGTCAAACCTTCTGT
TCCGCATCATTGGAGGAACACAGAAATATGGACAAAACATCCAAGCATAACGTACACCA
TCTATAATCGCTCGCCCGAAAAACGACCTTCTTGAAGATGCAGTGAAACAATGGTATCTG
CCTGTTATCTACTACGGCCAGCGCGACGCGGCAACAAGTTTACGGATCCGCGCTTGTAC
ACATTTGCAAACCTCGCCTACGACAAGAACTGCCTTGGCTGTCACTATGCGAAATGT
CAAGGCCCTGACAGAATCGTCATTAGTTGCATGTACAACAACGTCGTTCCCTGACAACGCA
GTGATCTACGAGCCTGGAAGTCTTGGCTAAAAGATGCGGACTGCACTACTTATCCTCAG
TCCACATGCAAGGACAGCCTTTGCATTATTCTTACGCCACATCCACCAATCCACCAAT
CCACCACCAGCAATGAGTCCAAACGCTGAAATGACTGATGCAGCACGAAAGAAGGTCCTC
GGCATGCACAACCTGGCGCAGATCGCAGGTCGCTCTGGGAAACGTTCAAACGGGAAAAAT
GCTTACAACCTGCCCCACTGCAACAGACATGTACAAGATAGAATATGATTGCGACCTCGAG
AACAGCGCTCTAGCGTATGCAAAGCAATGTAGTCTCGTTGGTTCAGCAGAAGGAACTCGT
CCAGGAGAAGGCGAGAATGTCCACAAAGGCGCTCTCGTAACCGATCCGGAGGCTGCAGTT
CAGACCGCAGTTCAAGCATGGTGGAGTCAAATCTCACAAAATGGACTCAATGCACAGATG
AAATTCAGTCTTCTTGAAGGACAAGCCTGACGCTCCGACAGCGTTTACACAGATGGCG
TGGGCCAAATCCGTAAAGCTTGGATGTGCTGTCTTAATTGTCAGGCAGATACCTTACC
GTCTGTAGATACAAAGCTGCCGGAACATCGTGGGCGAATTCATCTATACCAAGGGAAAT
GTATGCGACGCCTGTAAAGCCACATGCATTACCGCGGAAGGTCTTTGCCCAACGCCTTGA
TTTTCACTGGACTGTTTCACGAACAGATCAGATAAATCGTTTCATCAAAAAAAAAAAAAA
AAAA

Figure 13A

MPNLLLLLFLSLPGAILSTTCPGNDLTDARTLLTRVHNSIRREIAQGVANNYHGGKLPA
GKNYRMRYSCLEQAIDASQTFCSASLEEPQKYGQNIQAYVTPSIIARPKNLDLEDAV
KQWYLPVIYYGQRDAANKFTDPRLYTFANLAYDKNTALGCHYAKCQGPDRIVISCMYNNV
VPDNAVIIYEPGTACVKDADCTTYPQSTCKDSLIIPTPHPPNPPNPPAMSPNAEMTDAA
RKKVLGMHNWRRSQVALGNVQNGKNAYNCPTATDMYKIEYDCDLENSALAYAKQCSLVGS
AEGTRPGEGENVHKALVTDPEAAVQTAVQAWWSQISQNLNAQMKFTAFLKDKPDAPTA
FTQMAWAKSVKLGCAVSNCQADTFTVCRYKAAGNIVGEFIYTKGNVCDACKATCITAEG
LCTP*

Figure 13B

CAGCAATAGTCCAATGAAGCTCTTCATTCTGGTTTTGGTCGCTATCCTTGGCATTGCTCA
CGCCACTGATTTTCAATGCTGGAACCTTCAAATCGACGGATACACTGCGGGAACATTACCT
CAAATCCATTAACAACCTAAGGAAGAAAATCGCCGATGGATCAGCGGAAAACAAATCAGG
AAAGTGCCCGCAGGGCAAGAATATCTACAAGCTAAGCTGGGATTGTGAATTGGAAGTGAA
AGCACAGCAAGCTGTAGACCAGTGCAAACCGAATGTACCCGAACCCGCAGGATATTCGCA
AATACTAAAGAAGGTTAAAAGCACCTGCGACCCAACGAAGGTCCTGAAGAAACAGATAGA
AGCATGGTGGACTAAGTCCGTGAAAGATGCTGGAGTTGATAATCCTCCAAACAACAAACA
AGGTTTGAAGATTTTCGCAAAGTTAGCAAATGGAAAGGCTACGAAGATTGGTTGTGCGCA
GAAAACTGCAACGAACAGTTGTACGTGGCATGTGTTATTAACGAACCGGCTCCTGCAGT
GGGTATGCCAATCTATGAGGTTGGAGCTGGATGTAATTCCAAAGACGATTGTACAACGTA
TCTGCAGTCGAAGTGCAGTAACAAAGTATGCGTCGCCGGGCACCCAGGTGATGCCACCAC
TACAACATCAACACCAGCPACAACAGCACCAACAACACCCACGATTCTTGCTGGACCAAC
AACTGCGCCAGCTCCACCACCAACAACCTGCAGCTCCTACAACGACGAGTACGATTGGTTC
GATTGACAATACGATTTGTCCGCAAAACCAAGTGATCACCGACTCAGTCAGGCTCACATT
CTTGAATACGCACAACGGACTCAGATCTCAACTCGCGCAAGGTCAAATCTTTATGGGAAA
TGCGCTAGGGCGCGTCCGGCATCGAAAATGAGGAGGATGGTATATAACTGTGATGCGGA
ATCAAGCGCTCGCAATTCGGCCGCTCAGTGCCTTAGCAGCCCCGGTTCACCTAGCGGCTA
CACTGAGAACTTGCATGTTATCAACAACAACCTTGTGGACCATAACAGTGC GGCTACTCA
GGCTTTTAACGCATGGTGGTCAGAAATTAACACAGGATATATGCGTCAGGCAGAGACGGA
AAGGAATATGTACTCTCTGAGCGTTGGAATACCAAACCTTCGCTAAAATGGCTTGGGAAAC
CAATGCACATCTTGGTTGTGCTATAGTCAGATGCGGTTTGAACACGAACGTCGTCTGCCC
CTACTCCCCAAAATCGGATGGAGGCCAAATTTACAAGATGGGCCCCCTTTTGACAGACGTTG
CCCCGACTACCTGGGACTTTTTGCAACCAAGGACTCTGCTCATTTTAAGACCCGCCCCG
ATATATCTTTGGGGAGATAATTTTACGAGCAATAAACCAAGCGTGAAGAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAA

Figure 14A

MKLFILVLVAILGIAHATDFQCWNFKSTDTLREHYLKSINNLRKKIADGSAENKSGKCPQGKNIYK
LSWDCELELKAQQAVDQCKPNVPEPAGYSQILKKVKSTCDPTKVLKKQIEAWWTKSVKDAGVDNP
PNNKQGLEDFAKLANGKATKIGCAQKNCNEQLYVACVINEPAPAVGMPIYEVGAGCNSKDDCTTY
LQSKCSNKVCVAGHPGDATTTTSTPATTAPTPTIPAGPTTAPAPPTTAAPTSTIGSIDNTI
CPQNQVITDSVRLTFLNTHNGLRSQLAQGQIFMGNGARARPASKMRRMVYNCD AESSARNSAAQC
LSSPGSPSGYTENLHVINNNFVDHNSAATQAFNAWWSEINTGYMRQAETERNMYSLSVGIPNFAK
MAWETNAHLGCAIVRCGLNTNVVPCPYSPKSDGGQIYKMGPFCRRCPDYPGTFCNQGLCSF*

Figure 14B

```
1   GGGTTTAATT ACCCAAGTTT GAGAATGATT CAATTGTTTT TGTTAGCGCT
51  CGTACCTATG TGCATCTCAG TGAGGGAACA GTCGATAGCT GTTAAAGGAC
101 GACTTTTGTG TGGCGATCAA CCAGCTGCGA ACGTCAGAGT AAAGTTATGG
151 GAGGAAGACA CAGGACCAGA TCCAGATGAC CTACTGGATG CAGGATACAC
201 GAACTCCAAC GGTGAATTCC AACTCCAAGG CGGAACAATA GAGACGACTC
251 CTATTGACCC CGTCTTGAAA ATTTATCATG ATTGCAATGA CGTGACTGGT
301 TTCCTAAGCG TACCTAAACC TGGCAGCAGA AAGGTGAGGT TCTCCTTACC
351 AGACAAGTAC ATCAGCGATG GAATGGTTCC TAAGAAAGTT ATGGACATCG
401 GTGTTATCAA TCTTGAAGTG GAATTTGAAA AGGAAGGACG TGAATTTATC
451 GTTGACTAAG TGATCAATAA ACTCATCGCT TTCTCTTTCT ATGTAAACAT
501 TTTTGTTGTG AACAAATCAT ATGGTTGTAC ATAATCCGAA CTGTTGGTTT
551 TTCGAATACT GCACAAATAA AGCATTTCTT CTAAAAAAAA AAAAAAAAAA
601 AA
```

Figure 15A

```
1   MIQLFLLALV PMCISVREQS IAVKGRLLCG DQPAANVRVK LWEE DTGPDP
51  DDLLDAGYTN SNGEFQLQGG TIETTPIDPV LKIYHDCNDV TGFLSVPKPG
101 SRKVRFSLPD KYISDGMVPK KVMDIGVINL EVEFEKEGRE FIVD
```

Figure 15B

CACTTCCAGCGATGTTCTGTCGTGTTACTGTGCGCGTTTTGTGTTGGCCGTATCGGCCCTATGCCCCGA
TTTTTCGATGACGTCAGTGGCATGGCCTCAGATGTTGGGAATTTCTTCACAAAACCAATTCAACAATGT
GAAGGATTTGTTGCTGGAAATCAATCGGAACCTCGAGAAGAACATCAATCGAGTAAAGGATCTTCTGA
CGCCCGTCAAAGAAAAGGCTAAGATGCTTGAACCAATGGCCAATGATGCTCAGAAGAACGCTTATCA
CAGGTGGACAACCTACCTCAACGaAGTGCAACAGTTCGGTGAACAGGTAAAGCAAAAGAAAGGCTCGCGGAA
GTTTCGAGGAGAACAAAGGCAAGTGGCAGCAATGCTGAACGACATCTTCGAGAAGGGCGGCTCTGGACG
GCGTGTGAAGCTGCTCAATCTGAAATCTGCCGGCCACTGCACACTCGTAGCGGCCATCGTCGCTCCA
GTAGTGTGGCGTTACCCCGCTAAGCGCCACCCCACTAATCGATAATTGTAGCCTGTCACTGCGCGTCC
ATCGATAATTGTTGTCGCGTGTGCGTATGCTTGCATCTATGATGATGTGTATCTATATGTGATT
TGTAATCTACTTCGCGCGCATTCAGCTCTGGTATCTGAGACGGATTATCGCTTCTCGCACACACTCAC
ACACACAAATAACCCCGATTATCTCCCGATTATCACCCGGTTAGTAGATGAGACATAATTTCCATCC
GTCCACATACTCTACTTCTATCTATGCTCAATGTGGTCTTTTATGTAAATAAACTTTTCCATCGAAAA
AAAAAAAAAAAAAAAAAAAA

Figure 16A

MFRCRVTVAVLLLVAYSAYAGFFDDVSGMASDVGNFFTNQFNNVKDLFAGNQSELEKNINRVK
DLLTAVKEKAKMLEPMANDAQKKTLSQVDNYLNEVQQFGEQVSKEGSAKFEENKGKWWQML
NDIFEKGGLDGVLKLLNLKSAGHCTLVAAIVAPVWVLAFT*

Figure 16B

Figure 17A

SPLPTDASGNYVTDEGTVIEKDDEGRPLGPDGQVLPTDESGNYIYPVVGPDGSPLPTDEHK
RPIHPVLGPDGSPLPTDESGHPLGEDGQPLPTDASGVPVDKDGQPLPTDSSGHYVTVPREE
AVTKELPTDESGNVIYPVTKPDGSPLPTDASGNYVTDEGTVIEKDDEGRPLGPDGQVLPTD
ESGNYIYPVVGPDGSPLPTDEYKRPIHPVLGPDGSPLPTDESGHPLGEDGQPLPTDASGVP
VDKDGQPLPTDSSGHYVTVPREEAVTKELPTDESGNVIYPVTKPDGSPLPTDASGNFITEE
GLIIGPDGVALPYPRNRTCCLKQKMDILFAVSTTKVSKSTFDSILRAISKFADEVLDLSPD
VTRIGLVYGSKDVVVPLPLGGYQEKDHMRDEIRRIEFSDDGSQDYISLYGPAKQQFVMFPR
ADSAKIAIFLIQDEISYCLSTRTLRCGCATAVDSDCRRINNVLADDIKVCKVPETAVVPTP
VVHPQGSRAVSVVVPRFFSAPPFDTHSPSRLTLLADFATEKEPLCGEHSFLSPQKWGKNHC
TLRIPLSMPGIDHKSDDHYYYDDQTPLESEYSLDLFGKAELVRFFVQVNVERELDLAPETV
RFSSLLRSNAAYYKSPGSRPNNSNSATKRRNSPAVP*

Figure 17B

TTTTATTACCCAAGTTTGAGAGAGGCTCGTGAAGTTGGTAGAAGGCTTAC
AAGGATGAGGCTCATTTTACCACTTGTCGCCTTGATAGGTATTGGTCTCT
CAGCACATTATGAAAGGGACTGTCCATGTACGCCCCGAAAAATTGTGGCTC
GACGTAGTGGTAGGTATCGACACCTCTATTGGTATGACAGAGGAAGGAGT
GACACAGGTCCTCGCCGATTTGTCTACGGTATTCCGAGACACAAAAATCG
CTCAAGGGGAAGGGCACCATTCCCGCATTTGGAGTCGTTACATATGGGCTG
AATGCCGAAACTAGGTACAACCTTGACTGATTTCAAATCAACAGACGATAT
GCTGGAGGCGATCTGGGATATTAAGTGCAGCGACGACAAGTACTCCAATC
TCTTTGCTGGACTGACGAGGACACAAGAAATTATGAAGAATGGCCGCCAA
GGAAGACTGAGAGCAAATGTCAGATCAGCCATTATTATCTACGCGAGCGA
TTTCAGGGAAGGCGACGTGAATGACGCAGTTCAGCTGGCACATCAGATCA
AGATCGGAGGAACGGATATCATCGTAGTTGCTTTTGACCAAAAAGGAAAA
GTCAATGCGCTTGAGGGGCTCCAGAAGATTGCTTCGCCTGGTCGCCTCTT
CAAGAGCACTACGAAAAACCTAGTCGGTCTAATCCAGGATGCTTTGTGCC
AGACAAACTGCTTTTGCAAAAAGCTCTGGACGCAATACGGGGACGGATCT
GTGAAATATGGAGAATGTCTAAGGATCGGTGGAATCGACGCCAACTGGTT
AGCAGCTAAAAAAGCATGTCAGAGACTCATCCCTGGAGGTCATCTCGCCA
CTGAGCTCGACAGCTACAAGCATGACTTTATTGCACGAATGTTCAAGGAT
GACTATAGACACGAGCCTCCATACATGTATCACATCGGACTTTCCTTCGA
CAAACAGAAGAATGATTACTTCTGGGAGCAACCCAAAGATAGGATGCCTC
TGCCGCTGAAGGACTCACCTTTCGGATATTGGAGTCGCGGTTTCCCTAAC
CCTCGGGAAAAGGATACTTGCGTACTTGCAGCTCAACAACCATACTTTC
GCCCAGATTGGCTGGCAGAACGAGCATTGCACCAAAGTTGCAAAGAGAT
ACATCTGTCAAGTGGAATCATGTGATACAGACAACCTACTGTGCCAATCTA
TAAAGTACGACAATAAACTGCTCACCTAACAAGAATAAAATATGACATC
AAAAAAAAAAAA

Figure 18A

MRLILPLVALIGIGLSAHYERDCPCTPEKLWLDVVGIDTSIGMTEEGVTQVLADLSTVF
GDTKIAQGEHHSRIGVVTYGLNAETRYNLDFKSTDDMLEAIWDIKSDDKYSNLFAGL
TRTQEIMKNRQGRRLRANVRSIIIIYASDFREGDVNDVQLAHQIKIGGTDIIIVAFDQK
GKVNALGLQKIASPGRLEFKSTTKNLVGLIQDALCQTNCFCCKLWTQYGDGSVKYGECLR
IGGIDANWLAACKACQRLIPGGHLATELDSYKHDFIARMFKDDYRHEPPYMYHIGLSFDK
QKNDYFWEQPKDRMPLPLKDSFPRYWSRGFPNPREKDTCVLAAQTILSPEIGWQNEHCT
KVAKRYICQVESCDTDNYCANL*

Figure 18B

```
1  GGTTTAATTA  CCCAAGTTTG  AGATGAAGCT  ACTCGCTCTT  TCCGCTCTCT
51  TCGCGCTGGC  CTTGCTGCT  CCTCGAGACA  AGCGGCTAGC  AGTGAGCACT
101 ATCACTGTCA  CCGGAGGACT  AGGTCTGTCC  ACGGGATGCG  TCGTCACTGG
151 CAACGTTCTA  TATGCAAACG  GTTTCGAGT  ACGTGAGATT  ACACCATCGG
201 AGCAGCAAGA  GTTGGTCAAA  TACCAAAACG  ACGTAGCTGA  GTACAAGACG
251 GCTCTGAAAC  AAGCAATCAA  GGAGCGTGAG  GAGAAAATCC  GAGCCCGTCT
301 CGCCGGTAAG  AAGGTGAAGG  CCGTGGAGTC  AACCAACCAA  GAGGACCTAC
351 CGAAACCGCC  ACAGAAGCCG  TCATTCTGCA  CACCAGAAGA  CACTACCCAA
401 TTCTTCTTCG  AAGGATGCAT  GATCCAGAAC  AACAAGATCT  ACGTCGGAAA
451 CACTTTCGCT  CGAGACCTGA  CTCAGCCTGA  AATCAGCGAA  TTGAAAGAAT
501 TCGAGAAGAA  ATTCAAGGTC  TACCAGGACT  ACGTACAGAA  GCAGGCCGAA
551 CAGCAAGTGA  ACAGCCTCTT  CGGCGGCTCT  GACTTCTTCT  CGGCGTTGTT
601 CAGCGGCGGT  GAGACGAGCA  AGCCATCCAC  GACCACCGTG  GCACCAGAAC
651 TTCCGGAAGA  CGTCCCGAG  CAGCCGCCCA  CGCCGAACTT  CTGCACCAGA
701 ATAATCTAAG  CCTCTAAATT  GTTCGTTTCG  CTATTGGATT  GGTGGTTTG
751 GTGAATAGCG  ATTCCGCTTC  CCCTCTCGTA  CTTACGGTGT  CGACTAGCAC
801 ATTAGTCATG  CGTTGCAATA  TTTGAACATT  GTATTGAGGT  ATATTGTACA
851 TTTATATAAT  AAAATTATTA  TCTTAAAAAA  AAAAAAAAAA  AA
```

Figure 19A

```
1  MKLLALSALF  ALAFAAPRDK  RLAVSTITVT  GGLGLSTGCV  VTGNVLYANG
51  FRVREITPSE  QQELVKYQND  VAEYKTALKQ  AIKEREKIR  ARLAGKKVKA
101 VESTNQEDLP  KPPQKPSFCT  PEDTTQFFFE  GCMIQNNKIY  VGNTFARDLT
151 QPEISELKEF  EKKFKVYQDY  VQKQAEQQVN  SLFGGSDFFS  ALFSGGETSK
201 PSTTTVAPEL  PEDAPEQPPT  PNFCTRII
```

Figure 19B

1 ggggtttaattacccaagtgtgagggtactcctgttactgtctactttttatccatttggcggagcgcctggctttct 80
81 AGACACTAAATTCGGCCAGAAAGATAAAGAAAACCTCTTGACAAGATTAAAGCTGTGCTTAACGGCACTGCACATCATCGCGA 160
161 TTCGTGAAAAAATTCATTCGACTAAGGGGAAAAATAAAGCAAAGCTGACGCTCTCTCCAGCACGAAAGGCTATATTGGAC 240
241 GAAGTTATGAAGCATATCAAAATGATCAAAAAGGATAAGATTCAAGAGAAAGGGCGACTCAATCGATGAAATCAATGAAAA 320
321 GAGTGCAATCGGACAGTTGCTGTACCCAGGGTGACATCGTTCTTGACAGAAAAAGCAAGCCAGCAAAATTACCGAAGACATTG 400
401 AAAATGACAAAAGGGACCCGGAAAAACGACAGGCGTTCCGTGATCGCAATTATCCGGCAACATTATGGTCGAAGGGAGTG 480
481 TACTTTCACTTTTCATAGGAACGCAACTCCTGAAGTTAGAAGCGTTTGTGAAAAGCGCAAAACCTTTGGATGAAGGATAC 560
561 TTGCATCGACTTCTTCGAAAGCAACTCAGCGCCTGATAGGATTCTGTGTGTTCAAAGAGAACGGATGTTGGTCGTACGTTG 640
641 GTAGCTGGGCGGTGAACAAGATCTGTCACTGGGAGAAAGGTTGTCAATCGGTTGGCACAGCTGCGCACGAAATTTGGCCAC 720
721 GCTATTGGCTTCTACCACTCACGCAAGACATGATCGCGATAACTTTATACATTCAACGCACAAAAATGTCAAGCCCGA 800
801 TTGGTTGGACCAATTCACTCTTCAGACTCCGGCAACGAATGAGAACTATGGAATAACTTACGACTATGGAAGTATCATGC 880
881 ATTATGGTGCAAAATAGCGCCTCGCAGAACGGACGTCCTACAAATGGTTCCGCATGATCCCAATACGTAGAAAACTCTTGGA 960
961 TCACCCATAAATTTCCCTTCTATGAGCTTCTCATGATCAACAAACACTACGACTGCACATAAGAACTGTGACCCGGCTACTTC 1040
1041 TGCGCAGTGTAAGATGGGTGGCTTCCACATCCTCGGGATTGTACAAGATGCATTTGCCCTAGTGGATATGGAGGCAAAAC 1120
1121 TGTGCGACCAAGAACCCAGCCGGATCGGATCTATATACCAGGCCACCAATCAGTACCAGACCTTGACACGACGAAATTGGA 1200
1201 GACAAGAGAGCGGGACAGAGACCTAGAGAAAGACATGGACTTCTGCTATTATTGGATCACGGCCCCAAAAGGTTCAAAAAT 1280
1281 CGAAATCAAAATTGCTGGATTATCACAAAGAGCCGCTGTTGAAGGATGCCAGTACTGGGAGTAGAAAAATCAAGACTCATG 1360
1361 CCGATCAACGCTTTACCGGCTACAGGTTCTGCGCACCCAGAAGATGTTGGAGTTAGATTAGTGTGCAACTTCAACATCGTA 1440
1441 CCAATAATCACATACAACATATTCTACGCGACCTATGTCGATATTTCAGTACCCGTATCGTTGGTGATAATGTTGGCGGTCC 1520
1521 TATGCCTCAGCCACAACCAAAATAGCAATTGTGTCGACAATGAACAGTGTGCGACACTCGTGAGAACAAAGAACTTCTGTGTC 1600
1601 AGAGCAGATTTTTTCACAGAGTCCGTCAAAAGAGGTCATGTGCCAAAGTCCAGCGGTTTCTGTGCGCTAAacttttcagcaaa 1680
1681 caatggaataaatgttgaccataaaaaaaaaaaaaa 1722

Mtp 5-1 →
← Mtp 3-1

Figure 20A

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M R V L L L L L L S I C A S A G F L
D T K F G Q K I K K T L D K I K A V L N G T A L I A
I R E K F I R L R E K I K A K L T L S P A R K A I L D
E V M K H I K M I K K D K I Q E K G D S I D E I N E K
S A I G Q L L Y Q G D I V L T E K Q A Q Q I T E D I
E N D K G D R E K R Q A F R D R N Y P R T L W S K G V
Y F H F H R N A T P E V R S V F V K G A K L W M K D T
C I D F F E S N S A P D R I R V F K E N G C W S Y V
G R L G G E Q D L S L G E G C Q S V G T A A H E I G H
A I G F Y H T H A R H D R D N F I T F N A Q N V K P D
W L D Q F T L Q T P A T N E N Y G I T Y D Y G S I M
H Y G A N S A S Q N G R P T M V P H D P K Y V E T L G
Mtp 5-1 →
S P I I S F Y E L L M I N K H Y D C T K N C D P A T S
A Q C K M G G F P H P R D C T R C I C P S G Y G G K
L C D Q K P A G C G S I Y Q A T N Q Y Q T L H D E I G
D K R A G Q R P R E D M D F C Y Y W I T A P K G S K I
E I K I A G L S Q G A A V E G C Q Y W G V E I K T H
← Mtp 3-1
A D Q R L T G Y R F C A P E D V G V R L V S N F N I V
P I I T Y N I F Y A T Y V D I Q Y R I V G D N V G G P
M P Q P Q P N S N C V D N E Q C A T L V R T K N F C
Q S R F F T E S V K R G L C P K S S G F C R *

Figure 20B

TTTAATTACCCAAGTTTGAGCAATGAAATACATTGTTCTGCTTCTGCGCCTTCTTCGTGGTCAATGCTGATGA
GGAAGACGATCTACCCCGCAATCCTTTGTGGACGCTTACAAGGATGACAATGGCAAAATATGTGATTCGGTACGT
CATTAAACGGAAGTTATGGAGAGGAGAAAAAGTTTATTTGAAATGATGGACGAAATCGATAAGAAATACCTGCGT
CCGCTTCATACCCAGATCGACAGAGCAGGATTATATCGAAATCGTAAACAGACTAGGAGAAAGGAACCGGCGCTGT
TGTAGGTAAACCTGGAGGAAAAAGCATCGTGTGTTGGAATCGAGCAAAATTCATAATGATCCAACTCCTGCGCC
TGTAATGCAGACTTTTGATGAAAAATCATTGGCTTACCACCTGAACACATTTCGACCAGAGAGGAAAGATCATATCAA
GATACACTGGGAGAACATCGAGAAAAGGTTACGAAAGCTTCTTCGCCCTCTCTCTGTTAAGCCCGATCCGTA
AATACCATATGATTACTACTCCATCATGCATCAAGAAAGGACGCCCTTTCGCAAGCCGGCACGATCACAATGGA
AACTTTGGATAAGCGCTACCAGGATATCATTTGGGAATCAAGAGAAGCCGTCGAAGTTGGATTACAAGAAAGATCTG
CACCAAGTATAAATGCGATATCTGCATGGGTGAGAAAGATGAAGTATTAAAGAAAGGAATGACGTTAACATAAAGGA
ATGGTTGCCGATTTCAACAAAAACGAACGTCATAATACATCTGGTGTGTTTCCTCATGTTAGAAAATCCAATAAAGCA
TTTCACCGAAAAAATAAAAAAAAAA

Figure 21A

MKYFVLCFAFFVNADEEDDLPRNPLWDAYKDDNGKYVIPYVINGSYGEEKKVLFEMMDEIDKNTCVRF
IPRSTEQDYIEIVNRLGEGTGAVVGKPGKSIIVLLESSKIINDPTPAPVMQTLMKIIGLPPPEHIRPERKD
HIKIHWENIEKGYEAFALSSSVKPDYPYGIPIYDYSIMHYKKDAFAKPGTITMETLDKRYQDIIGNQEKPS
KLDYKKICTKYKCDICMGEKMKY*

Figure 21B

TTAATTACCCAAAGTTTGAGAAATGGCAACTATGCTCGCGGTATGTGCTTTGGTCGTCTTCCTCACCCGCCG
TTCACACGGTGTGAGCAAGGGGAAGACCCATCAACATTTTCGAGCAAAAAGGAAGAGGAGACATCACAC
AGCTGAGAGAAAAAGGAGCGCAATGTTCAACGCCCTTCACAGAACGTCGAGTCTGAAGTGAACAAGA
GGGATTGAGACGGGAATTTTGTATACCGTACATAATTACAGGACGCTATGACCGAACGGAGCGGGGAA
TATCAAGGAAGCAATGAGGCGCATCGAGGCAAAATACGTGTATTCTGTTTCAAGCAAAAGAGACTATGAGAG
AGACTATATCGAGATCCAGAACAAAGCTGGACATGGATGTTACACCAATGTGCGTCTGCGTGGCAG
AAGTATACTGATGCTCGAGTCCAGCTTCGAGGAAACATGTCATGGAGACAGAAATCGTGTGACCGAGTT
GATGACGTTGTCGGTCTGTGGCACGAACACATGCGCCACGATCGTGACAAATACATCAAAGTGCACATA
CGAGAACATCGAAAGGAGTTACTGGAACCAATTTCGAGAAAGTCTCACCGATGGAAGCTACCACGTATAA
CGTACCGTATGACTACAAATCCGTTCATGCACTACGAGAAAGTGGCATTCGCCAGACCTGGACGAATCAG
CATGGAACCGCTTGATCCCAAATATCAGAACGTCATCGGACACCCAGAGGACGCCTCTCCCAGTACTA
CCGTAAGATCTGCGAGATATACCAAGTGAAGTGCATGAACGGCAAGATCGAGATCGGAGGCGACTC
GGACTCCAACCCGAAACCGCCAAACCGAGGCCAGTACCATCAGACCGGCCAGAAATCAACGGAGA
ATGCCGCGATATGATCCCGTCTTCTGCCGAGCGTTGGCCGCTCGCACATGATCGACTGCAGCTTCTT
CCATAAACAAATGCTGTGCAACCTGCGCCGAGTTAGGACACAGGATCAGGACCGAGGATGGTT
AGAACAAACAGGATGGCCATTCGACGGGCTCTCCGAATATTCGGACAAGGAGGTGGCCTTTTCACCTT
CTTCAATCGCTGGTAACTAATACAGGTCAAATAAATATTGCAAAATAAAAAA

Figure 22A

MATMLAVCRLVVFLTAVHTVSARGRPINIFEQKEGGDITQLREKGSAMFNALHRTSSLKWNKR
DSDGNFVIPYIITGRYDRTERGTIKEAMRRRIEANTCIRFKQDYERDYIEIQNKAGHGCTNV
GRVGGRSILMLESSFEETCMETEIVLHELMHVVLWHEHMRHRRDKYIKVHYENIERSYWNQF
EKVSPMEATTYNVPYDYKSMHYEKSAFARPGRISMETLDPKYQNVIGHQKDAASPSDYRKICE
IYQCKKCMNGKIEIGGSDSNPKPPTAPVTIRPAPEINGECRDMIPFCRALARSHMIDCSF
FHKQCCCATCAELGHRDQDQGGWLEQTGWPFGLFRIFGQGGWPFTFFNRW*

Figure 22B

CAAGTTTGAGCATGCTTCGACTAGCTCTCTTCGCGGTCCTCTTCGCTTGCGCATTTTCAG
CACCCAACGTTGAAGTGAACAAATTTCGAGGATATTCCCTGAGCAGTACAGAGAACTGATCC
CCAAGGAGGTAGCCGACCACATCAAGGCTATCACTGAGGAGGAGAAGACCATCTTGAAGG
AGGTGCTGAAGGACTACGCCAAATACAAGGACGAGAATGAGTATTTGGCAGCGCTGAAGG
AAAAGTCACCCAGCCTGCACGAGAAGGCAAAGAAGTTCCACGACTTCATTAAGGCTAAGG
TCGACGCACTTGGGGATGAAGCAAAGGCGTTCGTGAAGAAAGTGATTGCTGCTGCTCGCA
AACTGCACGCAGAGCTCCTTGCCGGAACAAACCTTCTCTTGAGGAACTGAAGAACACTG
TCAAGAAATACGTGGCCGAATTCGACGCGCTGACCGCAGCCGCAAAAGAAGATCTCAAGA
AGCACTTCCCCATCCTCACTTCCATTTTTCACCAACGAGAAGGCAAAGGCGTTGATGGACA
AGCACTTGCCGAAGTAGGTGAAGCAGCAGTTGTTTTTAGTCGAATAAATGTTTCAACTTT
TTAAAAAAAAAAAAAAAAAAAAA

Figure 23A

MLRLALFAVLFAFSAFNVEVNKFEDIPEQYRELIPKEVADHIKAITEEEKTILKEVL
KDYAKYKDENEYLAALKEKSPSLHEKAKKFHDFIKAKVDALGDEAKAFVKKVIAAARKL
HAELLAGNKPSLEELKNTVKKYVAEFDALTAALKEDLKKHFPILTSIFTNEKAKALMDK
HLPN*

Figure 23B

```
1  GGCACCTTCGA CATGAAGGTC CTTGCCTTAG TGTTACTTTG GGCTGCAACA
51  GCCACTGCTC TGCTAGACAT ATGTAAGGAG GAAATCAAGA CTGGAAATTG
101 TAGGGGGGCC TTCCGCAAGT TTGGCTACGA TCGATGCACG AATAAATGTA
151 TTCCGTACAC GTATGGAGGC TGTGGAGGGT CGAGCAACAT GTTCGACACT
201 TTGGAAGAAT GCCAAGAAAA ATGTGGCAAG CCCGAGGACC GCTGCTCAAA
251 ACCACTGGAA AGAGGAATAT GTCTGGCATC AATGAAAAGA TATGGCTACG
301 ATACAAGCAG TAAGAAGTGT AAGGCCTTCA TCTATGGCGG ATGTGGCGGT
351 AACGAGAACA ATTTGAGAC AATGGCTGAG TGCCGAGAAA CTTGCAAGGA
401 CACCTCTTCT GAAGAAGAAT CAGTACCTGA TGCATGCCTA TTGCCATCAG
451 AAGTGGGGCC ATGTAAAGGA AAAGAACGTC GCTTCTACTT TGATCAAAAA
501 CGTGGCAACT GCAAGTCGTT CTTCTTCGGC GGTGTGGTG GAAATGGAAA
551 TAATTTTCATG ACCAAAGCCA AATGCATGGA AACCTGCTCG AAACACATCA
601 AACCTGAAAC AGAGCAAGAC GTCTGCTCAC AGCCAATTAA AGCTGGACCT
651 TGCATGGCAA TGTTGAAAAG ATATGCGTAC GACAACAAGA AAAAGAGGTG
701 CGTGCAGTTT ATCTATGGAG GATGTAAGGG AAACAAGAAC AACTTCGAGA
751 GCATGGAAGA GTGCACCCGG ACATGTAAGA AAGCAGTACC AGAGCCTGAG
801 CAGGACACCT GCTCACAGCC CATTGAAGTT GGACCTTGCA AGGCAATGTT
851 GAAAAGATAT GCGTACGACA ACAAGAAAAA TAAGTGCGTA CGGTTTATCT
901 ATGGAGGATG TAAGGGAAAC AAGAACAAC TCGAAAGCAT GGAAGAGTGC
951 ACCCGGACAT GTAAGAAAGC AGTACCAGAG CCTGAGCAAG ACACCTGCTC
1001 ACAGCCCATT GAAGTTGGAC CTTGCAAGGC AATGTTGAAA AGATATGCGT
1051 ACGACAACAA GAAAAATAAG TGCGTGCGGT TTATCTATGG AGGATGTAAG
1101 GGAAATAAGA ACAACTTCGA AAGCATGGAA GAGTGCACCC GGACATGCAA
1151 GAAAGCAGTA CCAGAGCCTG AACCTGAGAA AGAGACCTGC TCACAGCCCA
1201 TTGAAGTTGG ACCTTGCAAG GCAATGTTGA AAAGATATGC GTACGACAAC
1251 AAGAAAAATA AGTGCGTACG GTTTATCTAT GGAGGATGTA AGGGAAACAA
1301 GAACAACCTC GAAAGCATGG AAGAGTGCAC CCGGACATGT AAGAAAGCAG
1351 TACCAGAGCC TGAGCAAGAC ACCTGCTCAC AGCCATTGA AGTTGGACCT
1401 TGCAAGGCAA TGTTGAAAAG ATATGCGTAC GACAACAAGA AAAATAAGTG
1451 CGTGCGGTTT ATCTATGGAG GATGTAAGGG AAATAAGAAC AACTTCGAAA
```

Figure 24A

1501 GCATGGAAGA GTGCACCCGG ACATGCAAGA AAGCAGTACC AGAGCCTGAA
1551 CCTGAGAAAG AGACCTGCTC TCAGCCCATT GAAGCTGGTC CTTGCAAGGC
1601 AATGGTGAGA CGATTTGCTT ACGACAACGC AAAGGAAAAG TGCCTAGAGT
1651 TCTTTTACGG CGGATGCAAA GGAAACAAGA ACAACTTCGA AACCATGGAA
1701 GATTGTACTT TTACGTGTGA GCAACGGCTG GCAAAGCCCC AGCTTGAGAA
1751 GGATGTGTGT TCACAACCTA TCACGGCTGG TCCTTGACAGA GCATCAATAC
1801 CGCGATACGG CTATGATTCT AAAAAACGAA AGTGTGTGAA GTTCACCTAC
1851 GGAGGATGCA AAGGAAATGG TAATAGGTTC CCGACGAAGA ATGAATGTGA
1901 GAAGACATGC AAGAGAGGAG CAACTGGAAC TACGAATCCA GGAGGTGAAA
1951 ATGATAAATG CTTGCTGCCA ATTGTTACCG GCCCATGCAA AGGAAAAAAT
2001 CGTCGCTATG CTTACAACAA CAAGACAGGA AAATGCGTGA GATTACCTA
2051 TGGTGGTTGC GGGGGAAACG AGAACAACCT CAAGACTAAG AAAGACTGCC
2101 AGGATGCGTG CGAAAACATA AATGCAGCTA GTCCATGCAC CCTTCCTATC
2151 GACAAAGGAG AAGGCGACTT GAATCTGACC AGATATGGCT TCAAAAATGG
2201 CAAGTGTGTC GCGTTCAAAT ACGGCGGACG ACGGGGAAAT CTCAACAATT
2251 TTGGAAGCAA AGCCGATTGC AAAGAAGCCT GCCTCAAGTA ACTACGAAGC
2301 TCCGCTGCAA ATCCCAGAAG ATCATTCGGT TGTCTCTGCC GTCTATGAAA
2351 CAATAAAGTA TTAATTTTGT TAAAAAATAA AAAA

Figure 24B

1 MKVLALVLLW AATATALLDI CKEEIKTGNC RGAFRKFGYD RCTNKCIPYT
51 YGGCGGSSNM FDTLEECQEK CGKPEDRCSK PLERGICLAS MKRYGYDTSS
101 KKCKAFIYGG CGGNENNFET MAECRETCKD TSSEESVPD ACLLPSEVGP
151 CKGKERRFYF DQKRGNCKSF FFGCGGNGN NFMTKAKCME TCSKHIKPET
201 EQDVCSQPIK AGPCMAMLR YAYDNKKKRC VQFIYGGCKG NKNNFESMEE
251 CTRTCKKAVP EPEQDTCSQP IEVGPCAMLR KRYAYDNKKN KCVRFIYGGC
301 KGNKNNFESM EECTRTCKKA VPEPEQDTCS QPIEVGPCKA MLKRYAYDNK
351 KNKCVRFIYG GCKGNKNNFE SMEECTRTCK KAVPEPEPEK ETCSQPIEVG
401 PCKAMLRKYA YDNKKNKCVR FIYGGCKGNK NNFESMEECT RTCKKAVPEP
451 EQDTCSQPIE VGPCAMLR YAYDNKKKNC VRFIYGGCKG NKNNFESMEE
501 CTRTCKKAVP EPEPEKETCS QPIEAGPCKA MVRRFAYDNA KEKCVFFYF
551 GCKGNKNNFE TMEDCTFTCE QRLAKPELEK DVCSQPITAG PCRASIPRYG
601 YDSKKRKCVK FTYGGCKGNG NRPFTKNECE KTCKRGATGT TNPGGENDKC
651 LLPIVTGPCK GKNRRYAYNN KTGKCVRFTY GGCGGNENNF KTKKDCQDAC
701 ENINAASPCT LPIDKGEGL NLTRYGFKNG KCVAFKYGGR RGNLNNFGSK
751 ADCKEACLK*

Figure 24C

ctcgcaactat ttaccctagc tgtagctagc gtacacagaa ggacattcca ccacccgogc
cgctatgtga agtcggtgtc gctttcgcgt caaccaacac ttcgtgaacg attgctcgga
actggcagtt ggggaagacta tcagaaacag cgttaccact accagaagaa acttctggca
aagtatgcgg cgatcaaagc gacaaaactg cagtctacca atgaaattga cgagcttctt
cgcaactaca tggatgcgca atacttcggc accatccaaa tcggaactcc agcgcagaat
ttcacagtga ttttcgacac cggttcttcc aatctgtggg tgccgtccga gaaaatgcc
ttccacgaca tcgcgtgcat gcttcgtcac cgttatgact ccggagcatt gtcgacgtac
aaggaggatg gacgaaagat ggccatccag tatggcactg gctcaatgaa gggcttcatt
tcaaaggata atgtctgcat cgctggaatt tgcgctgaag agcaaccgtt tgctgaggca
acgagcgagc caggcctcac cttcatcgca gcgaagtttg atggaatcct tggcataacc
ttccctgaaa tctctgtgct cggagtaccg ccagtattcc acacgttcat tgaacagaag
aaagtgccga gcccggtgtt cgctctctgg ctcaacagaa atcctgactc ggaactcgga
ggtgagatca ccctcgggtg aatggacacc cgacgatacg ttgagccgat cacatggact
ccagtacaa ggcgagggta ctggcagttc aagatggaca aggttcaagg aggatcaaca
tccattgctt gcccgaatga attttctgga tgccaggcta ttgctgacac tggcacttcc
ctcattgctg gacctaaagc acagtcgagg gcatccagaa attcattggt gcttgagcca
acttatgaag gagagtacat gattccttgc gacaaggtgc ctttccctcc ccgattatcc
ttcgttatcg aagcccgac tttcacccctc aagggtgagg attacgtctt gaccgtgaaa
gctggtggta aatcgatttg cctgtccggt ttcattggaa tggacttccc agagaggatc
ggagagttgt ggattcttgg ggacgttttt attggaaagt actacaccgt cttcgatggt
ggccaggccc gtcttggatt cgctcaagct aagtcagaag atggctatcc ggttggccct
gctgttcgaa ggtacaacaa gttctcggag gacagcggca gtgatgagga tgatgtattc
actctataag taacatgtat ccacaacttg ctctaatacct gatacgtgta ccgtgtctaa
cgtgcttcca cctttgataa actgattaat ctc

Figure 25A

LALFTLAVASVHRRRTFHHPRRYVKSLSRQPTLRERLLGTGSW
EDYQKQRYHYQKKLLAKYAAIKATKLQSTNEIDELLRNYMDAQYFGTIQIGTPAQNFT
VIFDTGSSNLWVPSEKMPFHDIACMLRHRYSYGASSTYKEDGRKMAIQYGTGSMKGF
SKDNVCIAGICAEEQPFAEATSEPGLTFIAAKFDGILGITFPEISVLGVPPVFHTFIE
QKKVPSPVFALWLNRPDSELGGEITLGGMDTRRYVEPITWTPVTRRGYWQFKMDKVQ
GGSTSIACPNEFSGCQAIADTGTSLIAGPKAQSRSRNSLVLEPTYEGEYMI PCDKVP
FPRLSFVIEARTFTLKGEDYVLTVKAGGKSICLSGFMGMDFPERIGELWILGDVFIG
KYYTVFDVGQARLGAQAKSEDGYPVGPVRRYKFSSEDSGSDEDDVFTL

Figure 25B

TTGACACAGGTTTCATCAAAATCTCTGGNGCTCCTGCATATATTATGTGGAGGAAATCGTTTCGAACCTGACCG
CAACGTACAACAAGGAACATGACCTCTACTACATCGACTGCAGAGCCCAATGGGTCTATCACGCTCACAAATT
GGCCAGCGCCAGTACAAAATTGAATCAAAGAACCCTCATCATTTGATGTCGAAGCAGATACATGCATCTTGG
CACTACATGGATACCACTTTCTCGGAGCAACATGGATCTTTGGTGCACCGTTCAATAGGCAGTTCTGTAA
TATTTATGATATGGGTAAACAAAAGGATAGGATTCGCTCATTCGCTGCAGAAATTAGCCTGCATTTACTAGT
TNTTATTCGACATTNTTAAACAACCTCCCTCAATAAAGTATTGNGTTTCAAAAAAAAAAAAAAAAAAAAAA

Figure 26A

LTQVHQISGAPAYYVEEIASNLTATYNKEHDLYYIDCRANASITLTIGQRQYKIE
SKNLIHVEADTCILALHGYHFLGATWIFGAPFIRQFCNIYDMGNKRIGFAHSLQN*

Figure 26B

```
1 aaggcgtatc cggaatgcgg ggagaatgag tggctcgacg actgtggaac tcagaagcca  
61 tgcgaggcca agtgcaatga ggaacccctt gaggaggaaag atccgatatg ccgctcacgt  
121 ggttggtttat tacctcctgc ttgcgtatgc aaagacggat tctacagaga caccgtgata  
181 ggcgactgtg ttagggaaga agaatgcgac caacatgaga ttatacatgt ctgaacgaga  
241 aagcaacaat aaccaaaggt tccaactctc gctctgcaaa atcgctagtt ggatgtctct  
301 ttgctgtccg aatagtttta gttgatatta agtaagaact cctgctggaa agaataaagc  
361 ttccaactc c
```

Figure 27A

```
KAYPECGENEWLDGCGTQKPCEAKCNEEPPEEDPICRSRGCLL  
PPACVCKDGFYRDTVIGDCVREEECDQHEIIHV
```

Figure 27B

GTTCCTCTCCTGCTAGTCGTCATCAGTGTGGTACTCACAGTCGCCTTTTGCGATGCAAGC
CCAGTGAAAGCCAGCTTTGGCTGCTCTAACAGTGGGATAACTGATAGCGATCGGCA
AGCGTTCCCTCGACTTCCACAACAATGCTCGGAGACGAGTTGCGCAAGGAGTTGAGG
ATAACAAATCCGGCAAACCTGAATCCAGCGAAGAACATGTATAAGCTGGACTGGGAC
TGTGAGATGGAACAGAAGCTCCAGGATGCTATCCAATCCTGCCCAGGCGGCTTTGCT
GGAATTCAAGGTGTTGCGCAGAATATAATAAGCTGGTCAGGCTCCGGTGGATTCCCG
AATCCATCAGAAAAGATAAACTCAACACTTGCCAGCTGGTGGGGTGGTGCAAAAAA
CAACGGCGTCGCCTCAGACAACAAATACACTGGTGGAGGTCTTTACGCCTTTTCCAA
TATGGTCTTCTCTGAGACGACAAAACCTCGGTGCGCCTACAAGGTTTGCGGCACTAA
ACTGACGCTATCGTGCATTTATAACGGAATTGGGTATATGACAGGCGCGCCAATGTG
GGAGACAGGTGAGGCTTGCAAGGCCGAGCAGACTGCACCACATTCAAGAACTCAG
GTTGCGAAGACGGCCTCTGCACGAAAGGAGCAGATGTCCCTGAGACGAACCAGCAG
TGTCCTCGTCAAACACCGGAATGACTGATTCAGTCAGAGATACTTTCCCTTTCATTGCAC
AACGAATTCAGGTGAGTGTGCCCCGAGGTTTGAACCCGATGCTCTTGGCGGAAAT
GCACCAAAAGCATCCAAAATGCTCAAGATGGTGTACGACTGTGAAGTAGAAGCATC
AGCCATCAGACATGGGAATAAATGCGTCTACCAACATTCTCACGGCGATGAAAGAC
CCGGCCTAGGAGAAAACATTTACAAAACCAGCATTGTCAAATTTGAGAAGAACAAA
GCAGCCAAGCAGGCTTCACAACCTTTGGTGGAACGAGTTGAAAGAGTTCGGTGTGCG
CCCATCCAACATGCTCACTGATGCTCTCTGGAACAGGCCCAACATGCAGATTGGTCA
TTACACCCAGATGGCCTGGGAGAGCACCTACAACTTGGATGCGCTGTTATATTCTG
CAATGATTTACATTTGGTGTGTTGTCAGTATGGACCAGGAGGCAATTACATGAATCA
CCTGATCTACACTATTGGTCAACCATGTTCCGAGTGTGAAGCTACCGCCACTTGCAG
CGTGACCGAAGGATTGTGCAAGTGTCTCTTAATTAGTCTACAATAAAGATGCTACTTT
CCAAAAA

Figure 28A

FSPVVVISVVLTVAFCDASPVKASFGCSNSGITDSDRQAFLDFHNNARRRVAQGVEDNK
SGKLNPAKNMYKLDWDCEMEQLQDAIQSCPGGFAGIQGVAQNIISWSGSGGFPNPSEK
INSTLASWWGGAKNNGVASDNKYTGGLYAFSNMVFSETTKLGCAVKVCGTKLTLSC
YNGIGYMTGAPMWETGQACKAGADCTTFKNSGCEGLCTKGADVPETNQQCPSNTGM
TDSVRDTFLSLHNEFRSSVARGLEPDALGGNAPKASKMLKMVYDCEVEASAIRHGKNC
VYQSHGDERPGLGENIYKTSIVKFEKNKAAKQASQLWWNELKEFGVGPSNMLTDAW
NRPNMQIGHYTQMAWESTYKLGCAVIFCNDFTFGVCQYGPGGNYMNHLYTIGQPCSE
CEATATCSVTEGLCSAP*

Figure 28B

GTTCTCGTACCACTTCTGGTTCTACTGGCTGTTTCTGTTGATGCAAATTCCGTGAGAT
GCGGAAATAATGGAATGACCGACGAGGCCCGACAGAAATTCCTCGACATGCACAAC
GGTTACAGATCGCAGGTTGCCAAAGGACAGGCCAAGGATGCACTCTCAGGAAATGC
ACCAAAAGCTGCCAAAATGAAGAAAATGGTATATGACTGTGGtGTCgAATCAACTGC
AATGCAGgAATGCTAAAAAATGtGTCTTCACTCATTTCGCATATGAAGGGACTTGGCGA
AAACATATGGATGACgACTGCACgCgAGATGGATAAAGTGAAATCAGCTGAACAGGC
TAGTCAGGGTTGGTTCAGTGAACCTCGCGGAATACGGTGTAGGGCCTGAAAATAAGC
TAACAATGCAGCTGTGGAACAGGCCAAATACTCAGATTGGACATTACACGCAGATG
GTCTGGCAGGACACCTACAAACTCGGATGTTATGTGGAATGGTGTCTCATCTATGACC
TACGGCGTGTGTCAGTATAGCCCTCAAGGTAACATGATGAACTCAATCATCTACGAA
AAAGGAAACCCCTGCACTCAGGATTCGGACTGTGGCTCAAATGCCAGATGCACcGCT
GACAAGGCGCTTTGCATCGTGCATGGATAgCTGGGCTATCCCACGGTCAACAGCGCT
TCTACTAATTAGCTTTGCTTCCTCTATAAATAAATGCATTGAAACAAAAAAAAAAAA
AA

Figure 29A

VLVPLLVLAVSVDANSVRCGNNGMTDEARQKFLDMHNGYRSQVAKGQAKDALSGN
APKAAKMKKMVYDCGVESTAMQNAKKCVFTHSHMKGLGENIWMTTAREMDKVKSA
EQASQGWFSELAJEYGVGPENKLTMLWNRPNQTQIGHYTQMVWQDTYKLGCVIEWCS
SMTYGVCQYSPQGNMMNSIIYEKGNPCTQSDCGSNARCTADKALCIVHG*

Figure 29B

GTTTGAGGATGAGGGTATTCCCTTTTAGTCCTCTTGTTGGCTATTTGTGCGAGCGCTGG
TTTCTTTGACACCAAGCTTGGTGAGAAAATAAAGAAAACGCTTGGCAAAATCAAAG
CTGCGCTCAACGGCACCTTACTCATGAAAATTCGTGAAAAATTCATTGCACTGAGAG
AAAAAATAAAGGCTAAGCTGAAGCTCTCCCCGGCACGAAAAGCCCTACTAGGCGAA
ATTATGAAGCACATTATTAATAAATCAAAAAGGATAAAATTCAAGAGAAAGGTGACTC
AATCGAAGAAATCAACTCGAAAAGTGCTATCGGAGAGTTGCTGTACCAAGGTGACA
TCGTTCTGACAAATAAGCAAGCCCAGGAGATTGTTGATGACATTGAGGGTGATGAA
AATGACCGCGGAAAACGACAGGCGTTCCGTGATCGCAACTATCCACGGACATTATG
GTCGAAGGGAGTGTATTATTACTTCCATGGAAACGCAACTCCTGAGGTGAGAAGCGT
TTTCACGAAAGGCGCAAGACTTTGGATGAAAGATACTTGCAATTGACTTCTTTGAGAG
CAACTCAGCACCCGATAGGATTTCGAGTTTTCAAAGAACAAGGATGTTGGTCGTACGT
TGGTAGGATCGGGGGTCAGCAAGATCTGTGCTGGGAAAAGGCTGTGAATCGGTTG
GAACAGCTGCACACGAAATCGGTCATGCTATTGGCTTCTACCACACTCACTCAAGAC
ACGATCGCGATAACTTCATCACATTTAACGCACAAAATGTCAAGCCTGATTGGTTGG
ACCAATTCACCAAGCAGACCCCGGCTACTAATGAGAACTACGGAATTACATACGAC
TACGGAAGTATTATGCACTATGGCGCAAATAGCGCCTCTGCGAATGGACAGCCTTCA
ATGGTTCCGTTTGACCCGAAATACGTAGAACTCTCGGATCACCCATAATTTCTTTTT
ATGAACTTCTCATGATCAACAAACCCTACGAGTGACCAAGAATTGCGATCCGAATA
CTTCTGCGCAGTGTAAGATGGGTGGCTTCCACATCCTCGGGATTGTGGAAGATGCA
TTTGTCCCAGTGGATATGGAGGCCAACTATGCGACCAGAAGCCATCCGGATGCGGA
TCGATCCTCCAAGCGACCGCTCAGTACCAGAACTTGCACGACAAACGTGGAAACGA
AGCAGCAGGGCAGAGACCTAGAGAAGACATGGACTTCTGCTACTACTGGATTACGG
CTCCACAGGGTTCAAGAATCGAAATCAAAATCGCTGATCTATCTCGAGGAGCCGCTG
TTGATGGGTGTCAGTATTGGGGAGTAGAAATTAAGACTCACGCTGACCAGCGCCTCA
CTGGCTACAGGTTCTGTGCTCCAGAAGATGTCGGACGTACATTGGTGTCGAACTCTA
ACATCGTACCAATAATCACATACAATAGATTTTTATGCAACCACTGTTGATATCCAGT
ACCGAATCGTTGGTGGTAATGTTGGCGGACCAAGGCCTCAGCCACAACCAACAGC
AATTGCGTCGACAATGAACAGTGCGCGACCCTCATCAGAACAAAGAATTTCTGTCA
GAGCAGATCGTTCACAGAGTCCGTCAAAAGAGGTCTATGTCCAAAGGCATGCGGTT
TTTGCCGCTAACTTTTCACGAGACAATGAAATAAATATTCGCAGCATCAAAAAAAAA
AAAAAA

Figure 30A

MRVFLVLLLAICASAGFFDTKLGEKIKKTLGKIKAAALNGTLLMKIREKFIALREKIKAKL
KLSPARKALLGEIMKHIIKIKKDKIQEKGDSIEEINSKSAIGELLYQGDIVLTNKQAQEIVDI
EGDENDRGKRQAFRDRNYPRTLWSKGVYYYFHHGNATPEVRSVFTKGARLWMKDTCID
FFESNSAPDRIRVFKEQGCWSYVGRIGGQQDLSLGKGCESVGTAHEIGHAIGFYHHSR
HDRDNFIFNAQNVKPDWLDQFTKQTPATNENYGITYDYGSIMHYGANSASANGQPSM
VPFDPKYVETLGSPIIISFYELLMINKPYECTKNCDPNTSAQCKMGGFPHPRDCGRCICPSG
YGGQLCDQKPSGCGSILQATAQYQNLHDKRGNEAAGQRPREDMDFCYWITAPQGSRI
EIKIADLSRGA AVDGCQYWGVEIKTHADQRLTGYRFCAPEDVGRTLVSNSNIVPIITYNF
YATTVDIQYRIVGGNVGGPRPQPQPNNSNCVDNEQCATLIRTKNFCQSRSFTESVKRGLCP
KACGFCR*

Figure 30B

```
1  GGTTTAATTA  CCCAAGTTTG  AGATGAAGCT  ACTCGCTCTT  TCCGCTCTCT
51  GCGCGCTGGC  CTTCGCTGCT  CCGCGAGACA  AGCGGCTAGC  TGTGAGCACT
101 ATCACTGTCA  CTGGAGGACT  AGGTCTCTCC  ACGGGATGTG  TCGTCACTGG
151 CAACGTTTTG  TATGCAAATG  GTTTCGAGT  ACGCGAAATT  AATCCATCGG
201 AGCAGCAAGA  GTTGGTCAAG  TATCAGAACG  ACGTAGCCGA  ATATAAGACG
251 GCCCTGAAAC  AAGCGATCAA  GGAGCGAGAA  GAGAAGATCC  GAGCCCGTCT
301 CGCCGGCAAG  AAGGTGAAGG  CCGTTGAGTC  GACCAAAGAA  GAGGACCTGC
351 CGAAGCCGCC  ACAGAAGCCG  TCATTCTGCA  CACCAGAAGA  CACTACCCAG
401 TTCTTCTTTG  AAGGATGCAT  GATCCAGAAC  AACAAGATCT  ACGTCGAAAA
451 CACTTTCGCT  CGTGACCTGA  CCCAATCTGA  AATCGGCGAA  CTGAAGGAAT
501 TCGAGAAGAA  ATTCAAGGTC  TACCAGGACT  ACGTTCAGAA  GCAGGCCGAA
551 CAGCAAGTGA  ACAGCCTCTT  CGGCGGCTCT  GACTTCTTCT  CGGCACTGTT
601 CAGCGGCGGT  GAGACCAAGC  CATCCACGAC  CACTGTGGCA  CCAGAACTTC
651 CTGAAGACGC  TCCCGAGCAG  CCGCCCACGC  CCAACTTCTG  CACCAGAATA
701 ATCTAAACGT  GCTCTGAATT  GTCCACTTAG  TTGTTGGATT  GGTGTTTGG
751 GTGAATAGCG  ACTTCGCTTC  CCCTCTCGTA  CTTACGGTGT  CGACTAGCAC
801 ATTAGTCATG  CGTTGCAATA  TTTGATCATT  GTATTAAGGT  ATATTGTACA
851 TTTATATAAT  AAAATTATAT  TTCAACTCAA  AAAAAAAAAA  AAA
```

Figure 31A

```
1  MKLLALSALC  ALAFAAPRDK  RLAVSTITVT  GGLGLSTGCV  VTGNVLYANG
51  FRVREINPSE  QQELVKYQND  VAEYKTALKQ  AIKEREKIR  ARLAGKKVKA
101 VESTKEEDLP  KPPQKPSFCT  PEDTTQFFFE  GCMIQNNKIY  VGNTFARDLT
151 QSEIGELKEF  EKKFKVYQDY  VQKQAEQQVN  SLFGGSDFFS  ALFSGGETKP
201 STTTVAPELP  EDAPEQPPTP  NFCTRII
```

Figure 31B

1 GGTAAATTAC CCAAGTTTGA GAATGATTCA ACTGTTGTTG TTAGCGCTAC
51 TCCCTGTTTG CATCTCAGTG AGGGAACAGT CGATAGCAGT TAAAGGACGC
101 CTTCTGTGCG GTGATCAACC AGCAGCGAAC GTCAGAGTGA AGTTGTGGGA
151 AGAAGACACA GGACCAGATC CAGATGACCT ACTGGATGCA GGATACACGA
201 ACTCTAATGG TGAATTCCAA CTCCAAGGCG GAACAATAGA GACGACTCCC
251 ATTGATCCCG TCTTGAAAAT TTACCATGAT TGCAATGACG TGA CTGGTTT
301 TCTGAGCGTA CCTAACCTG GCAGCAGAAA AGTGAGGTTC TCCTTACCGG
351 ACAAATACAT CAGCGATGGA ATGGTTCCTA AGAAAGTCAT GGACATCGGT
401 GTTATCA

Figure 32A

1 MIQLLLLALL PVCISVREQS IAVKGRLLCG DQPAANVRVK LWEEDTGPDP
51 DDLLDAGYTN SNGEFQLQGG TIETTPIDPV LKIYHDCNDV TGFLSVKPG
101 SRKVRFSLPD KYISDGMVPK KVMDIGVI

Figure 32B

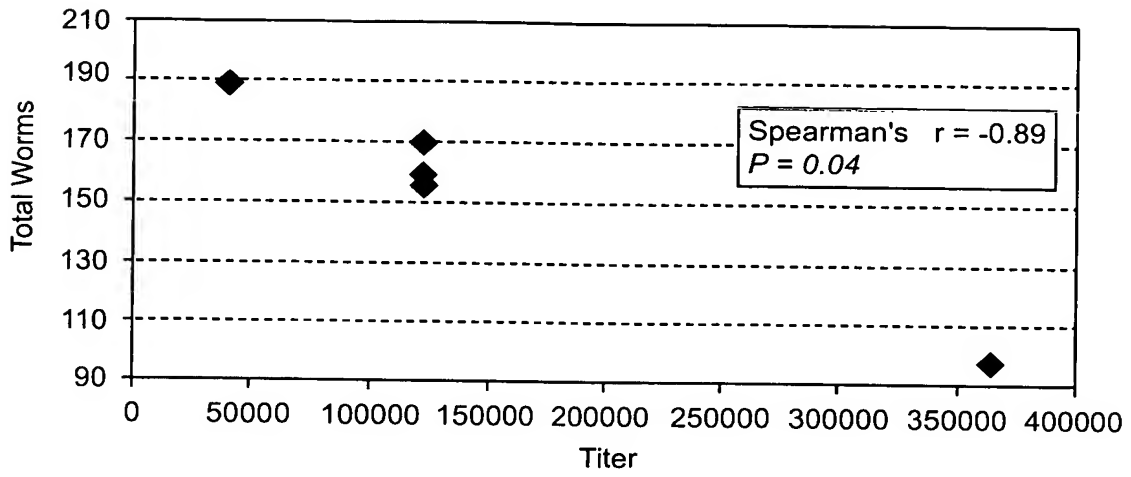


Figure 33A

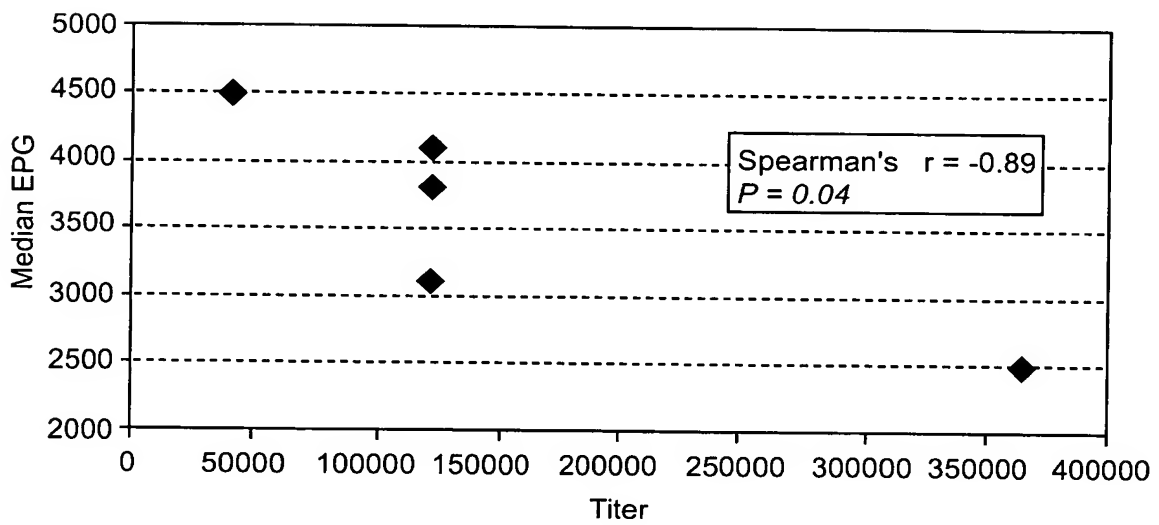


Figure 33B

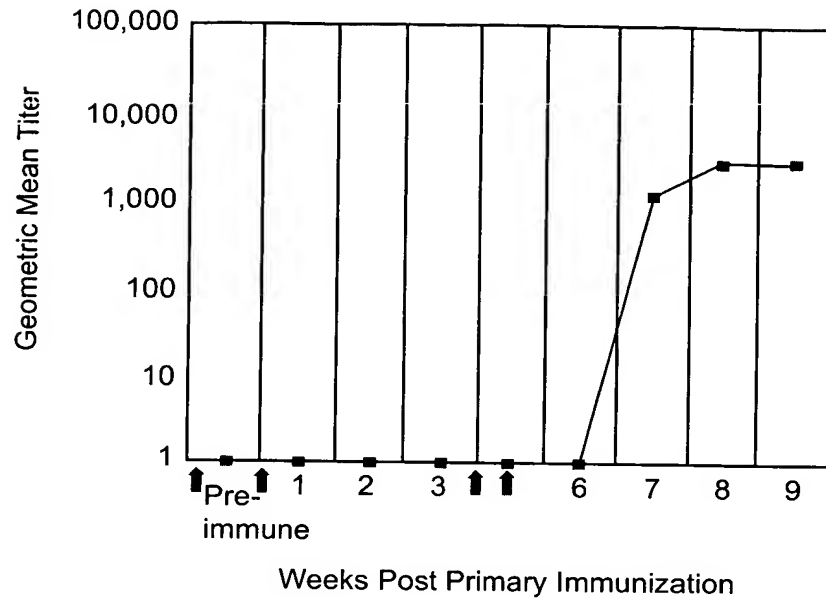


Figure 34A

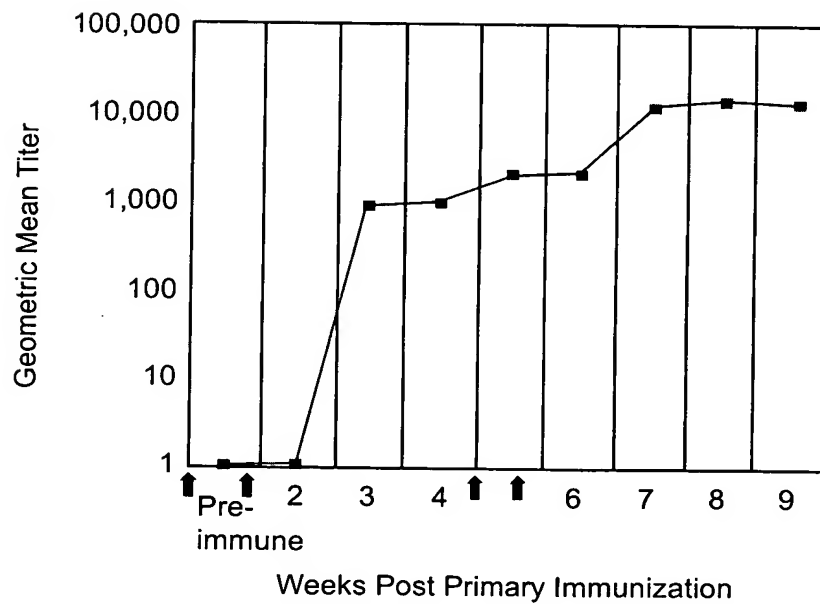


Figure 34B

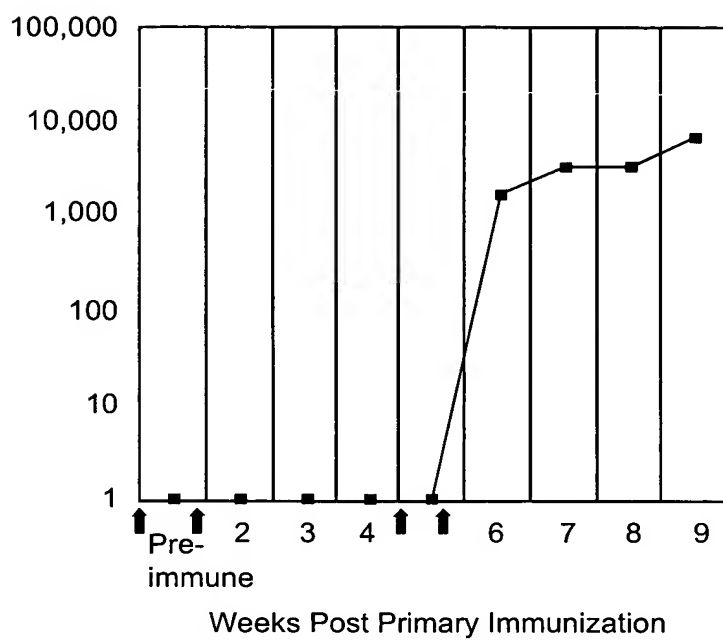


Figure 34C

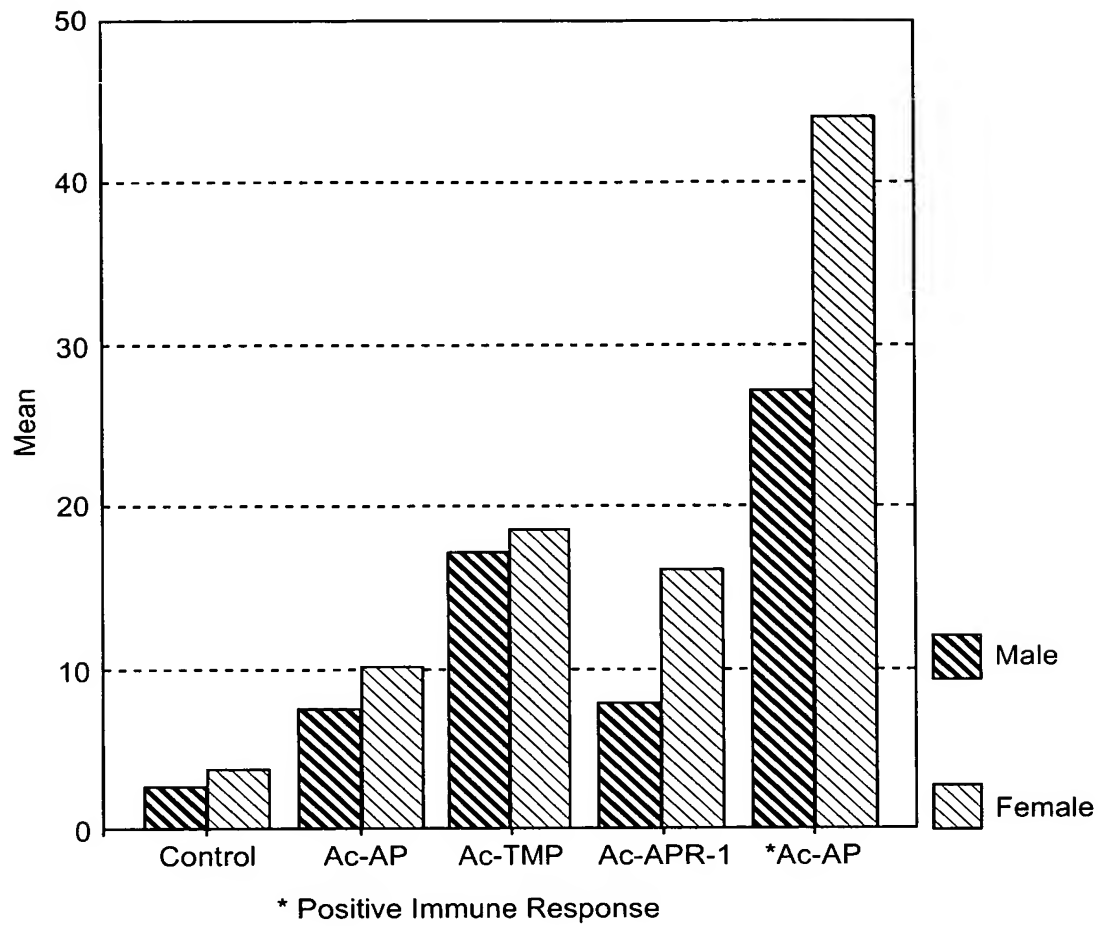


Figure 35

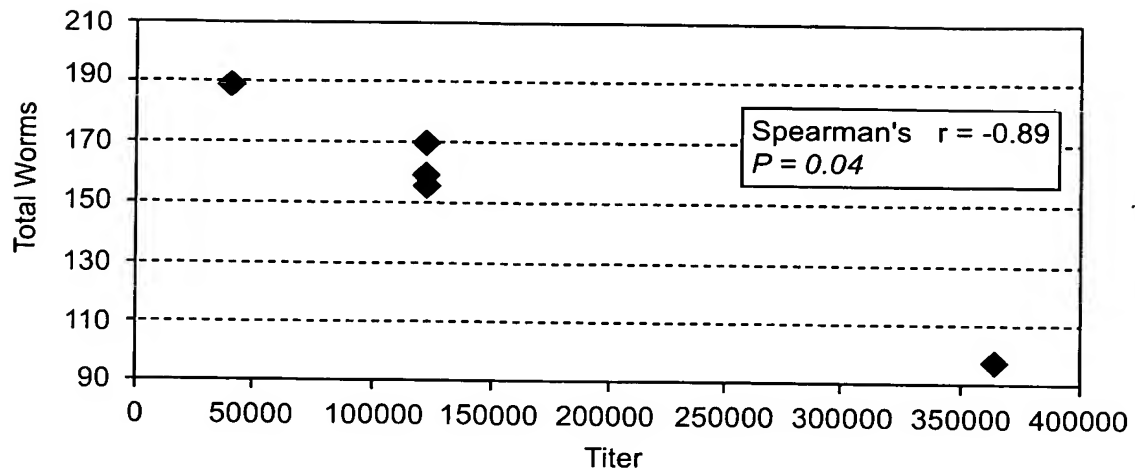


Figure 36A

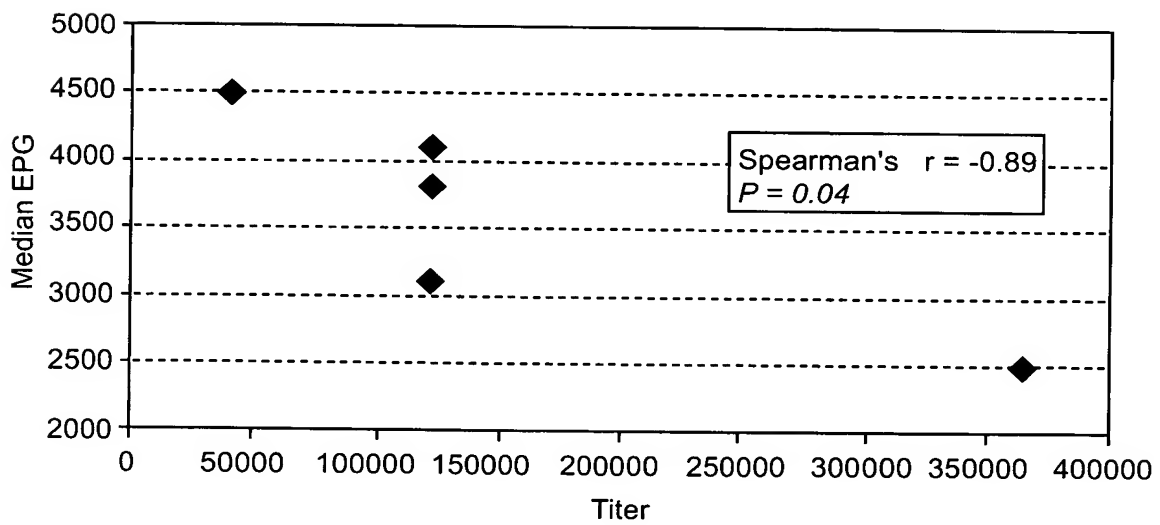


Figure 36B

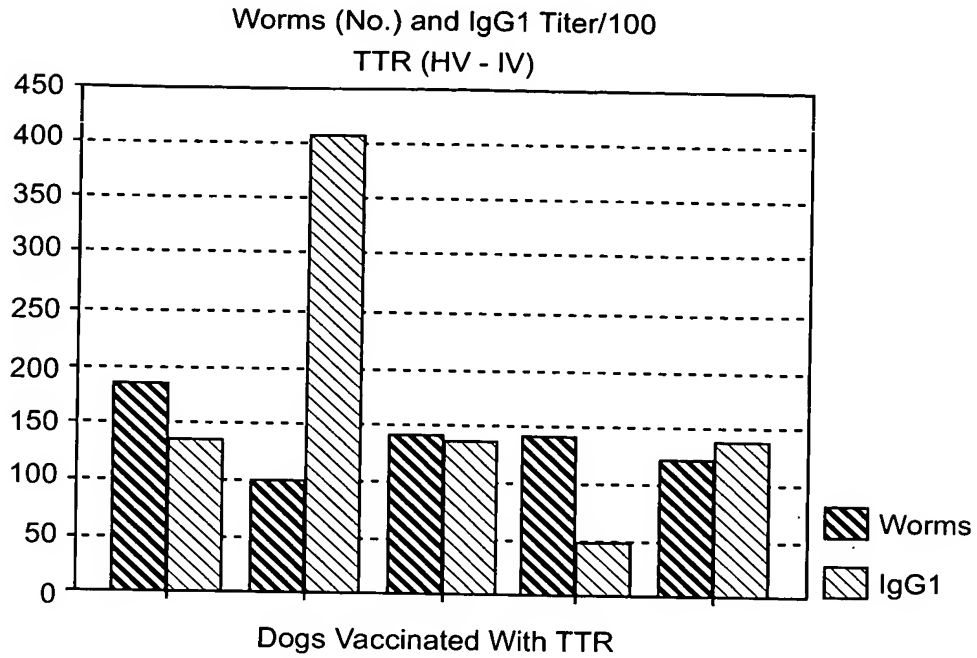


Figure 37A

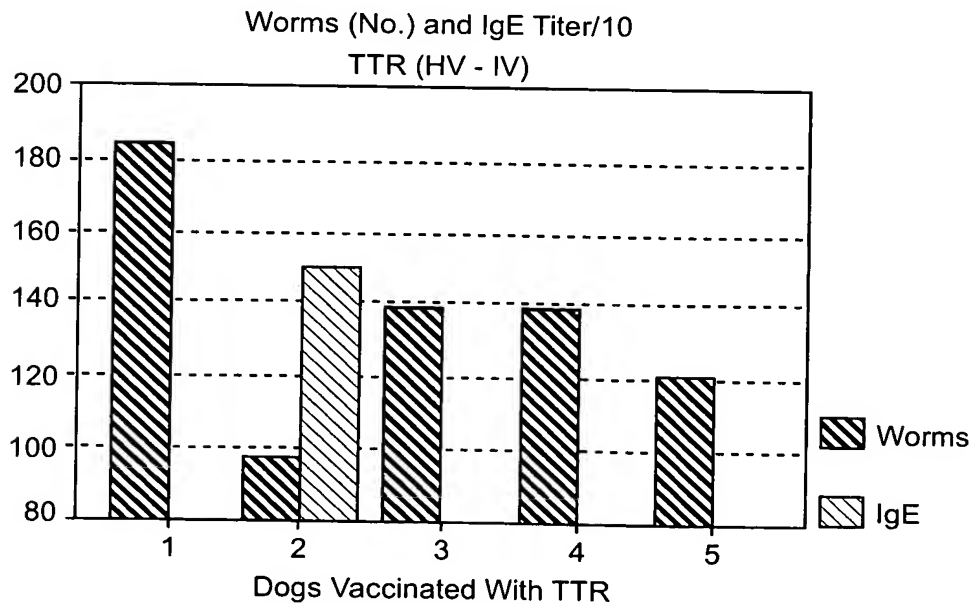


Figure 37B

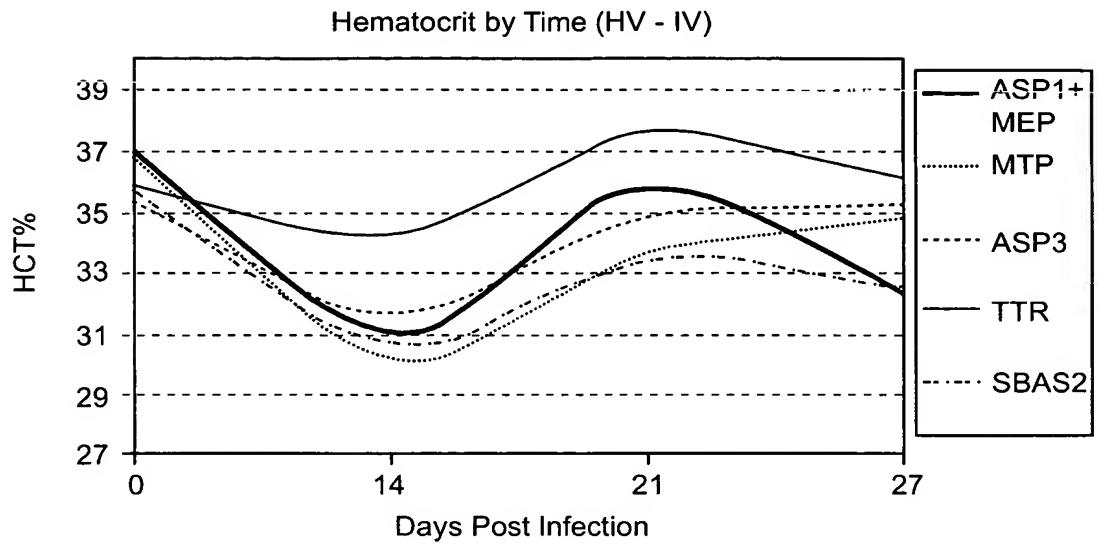


Figure 38A

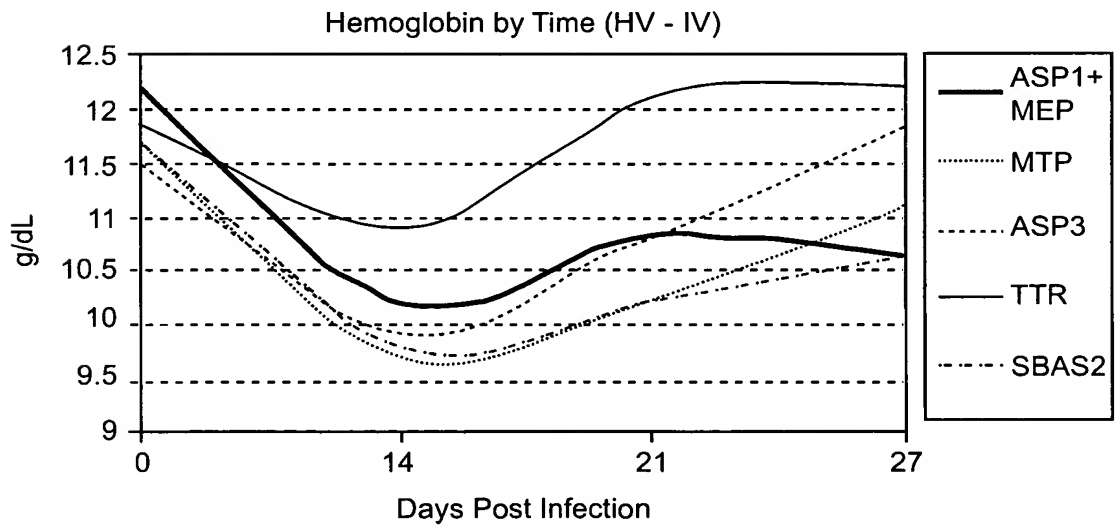


Figure 38B

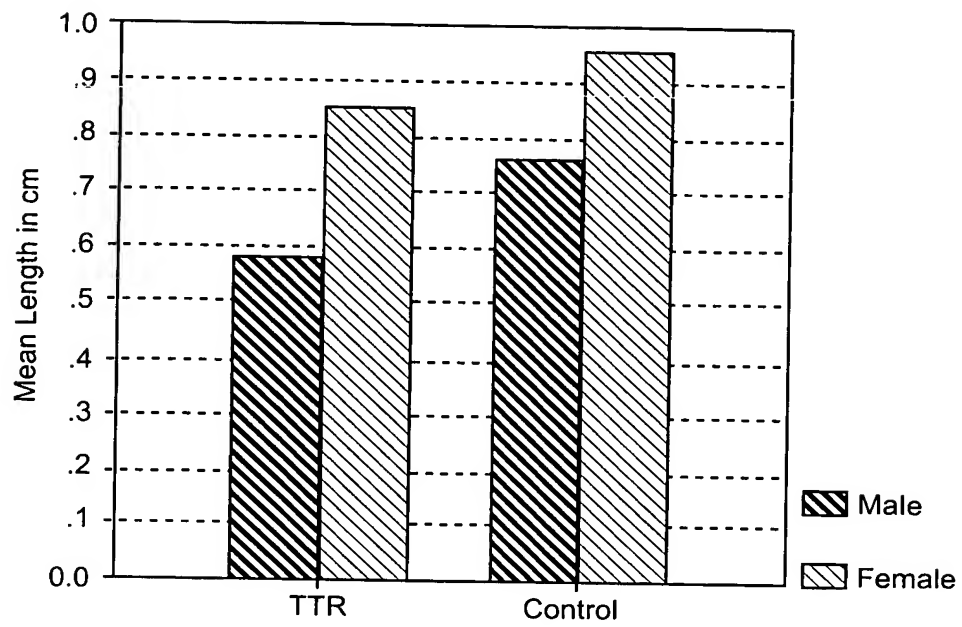


Figure 39

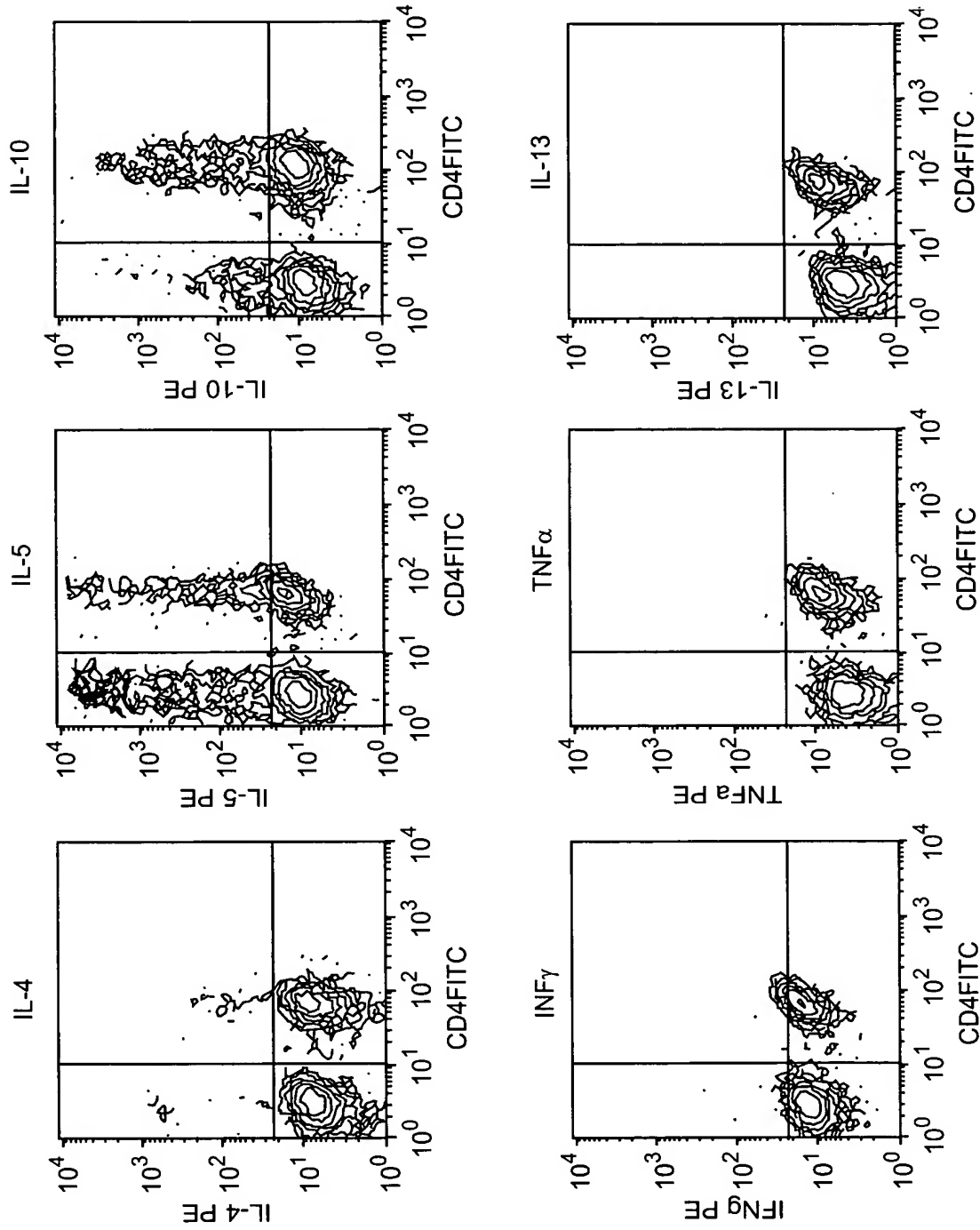


Figure 40



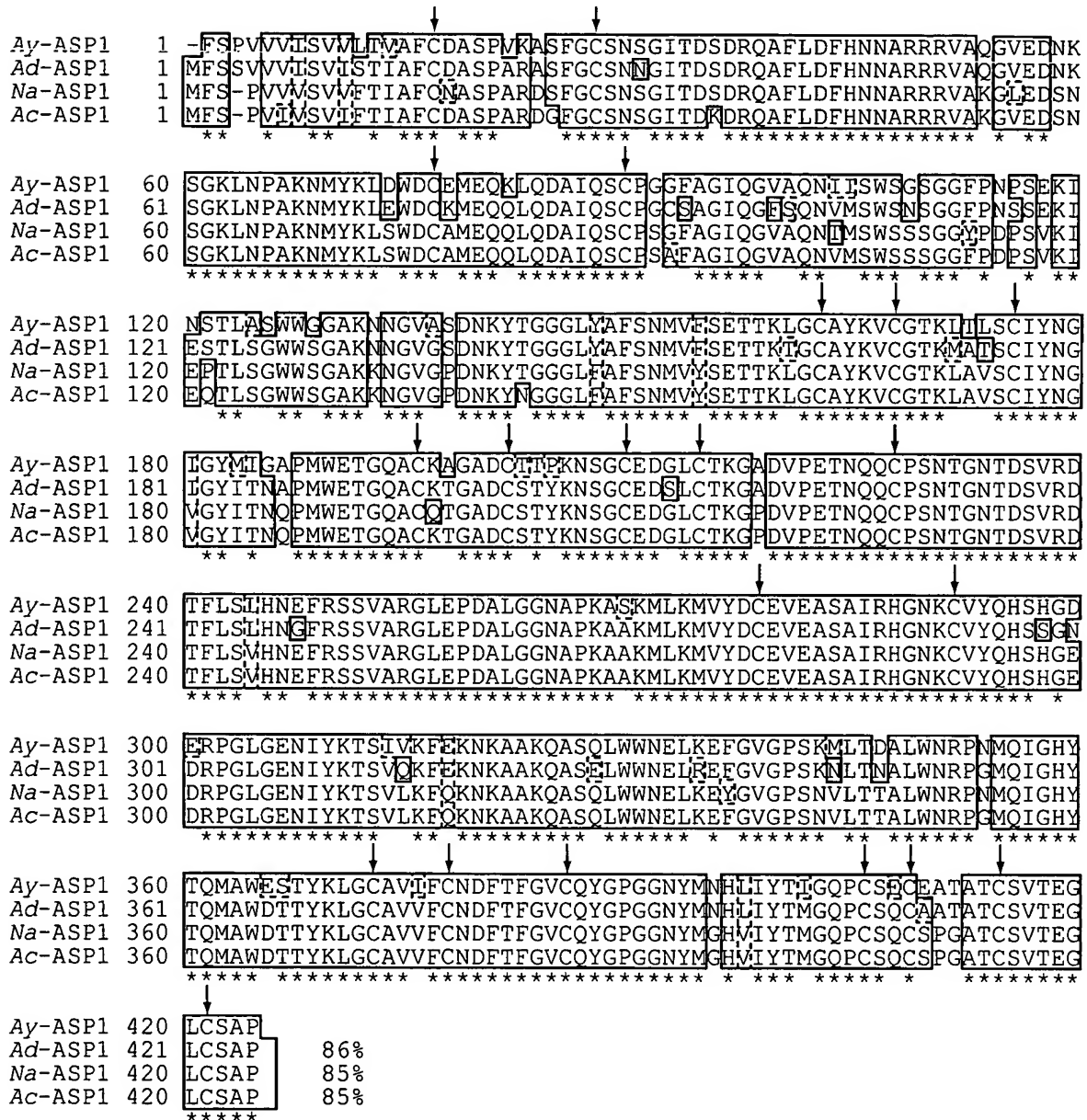


Figure 42



Figure 43A

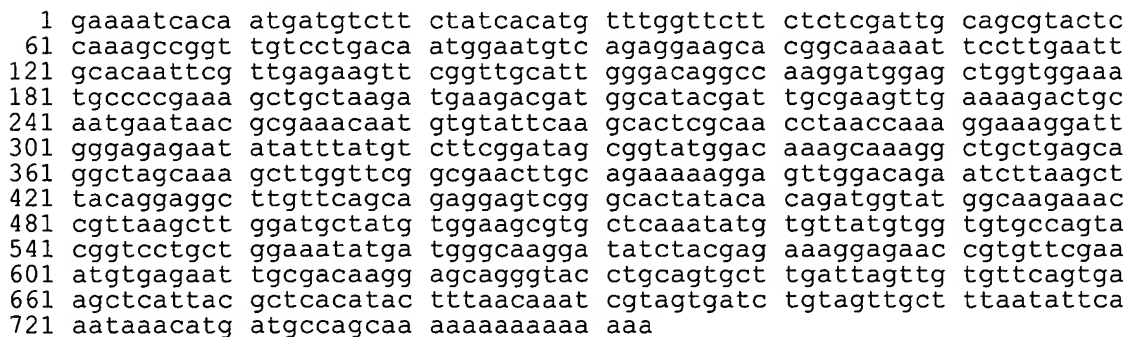


Figure 43B

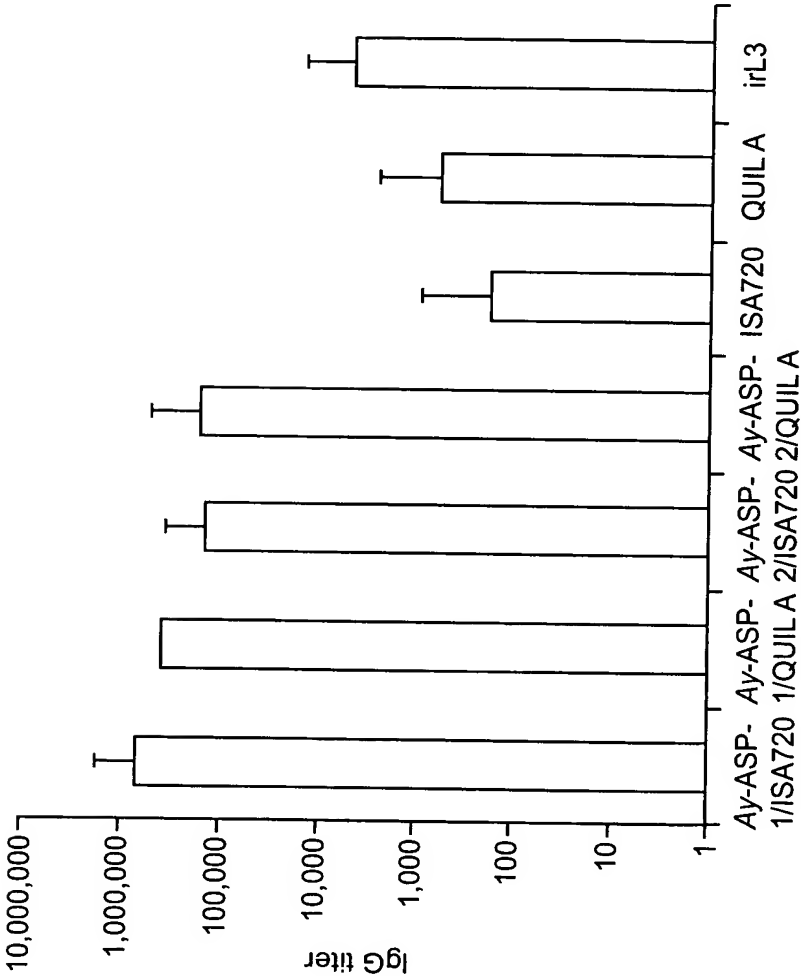


Figure 44

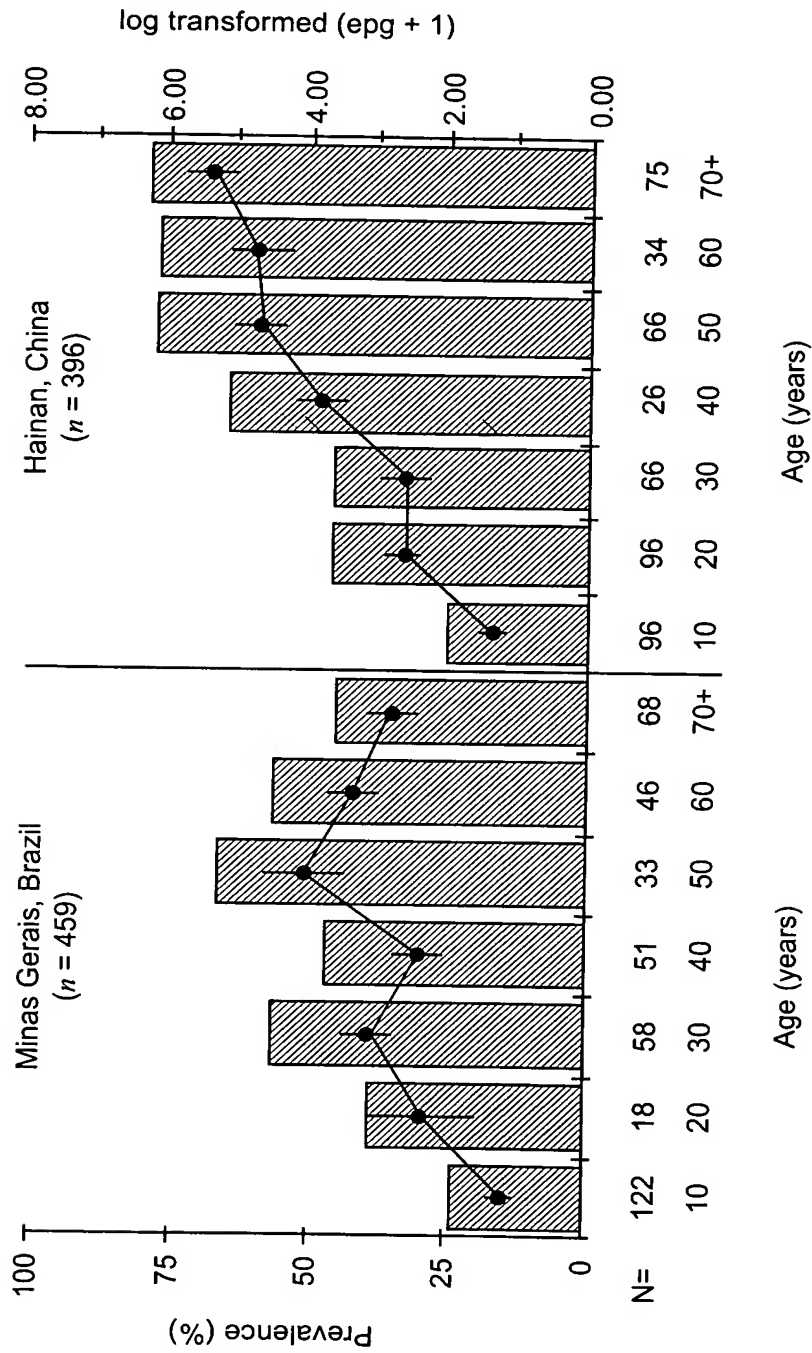


Figure 45

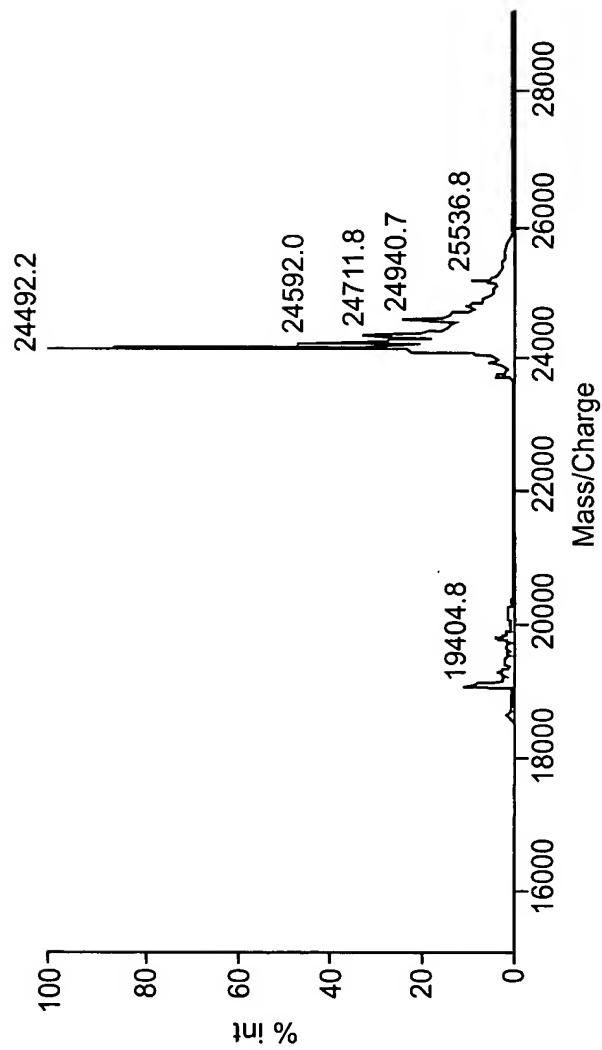
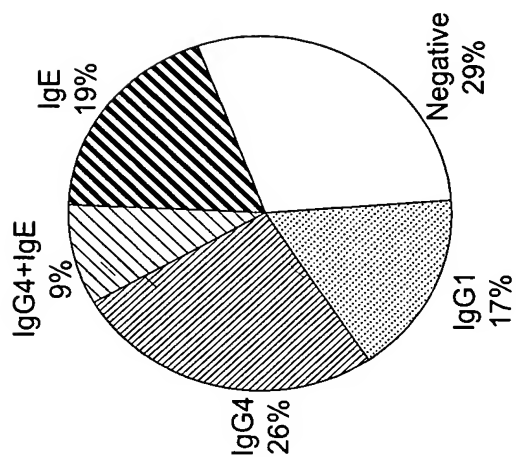
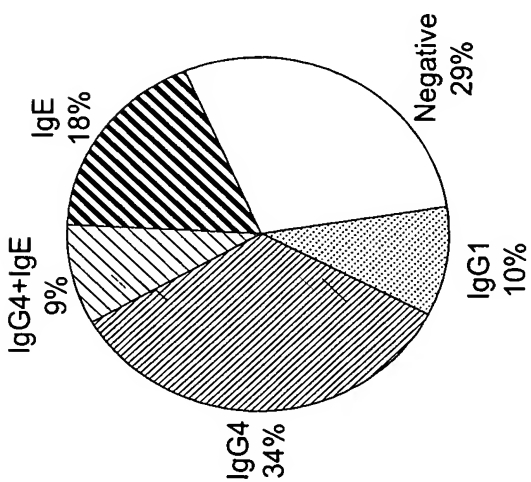


Figure 46



Brazil
(n = 257)

Figure 47B



China
(n = 245)

Figure 47A

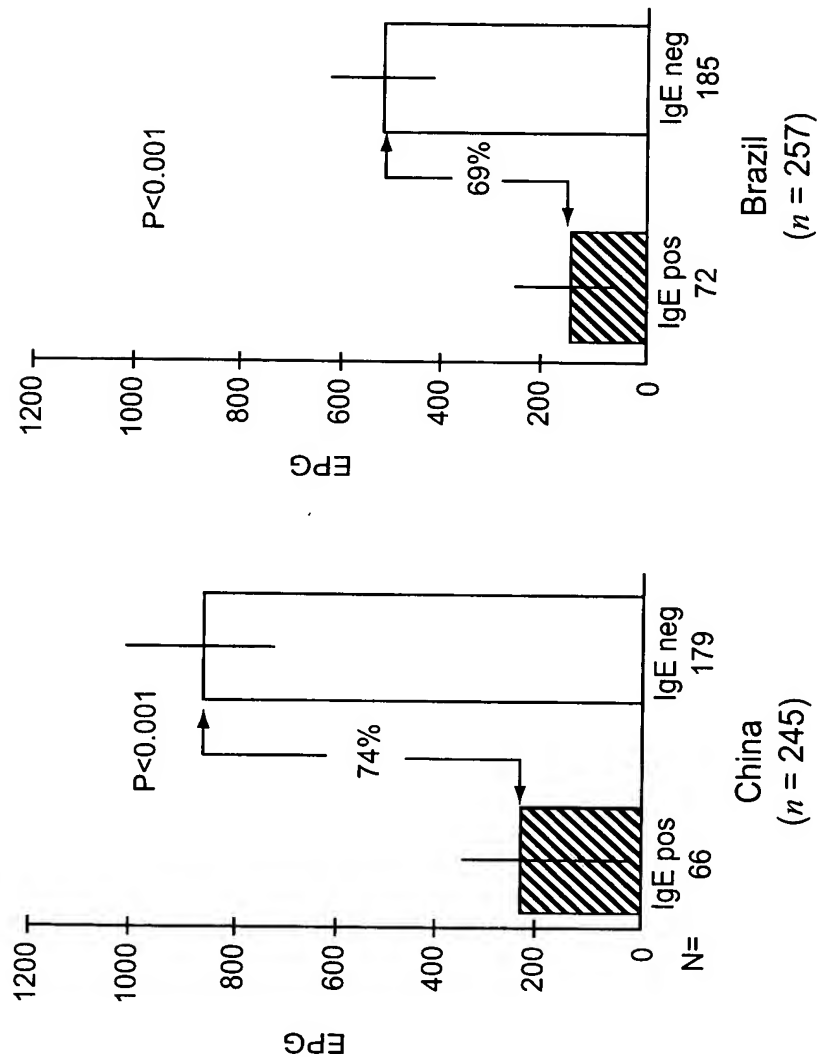


Figure 48B

Figure 48A

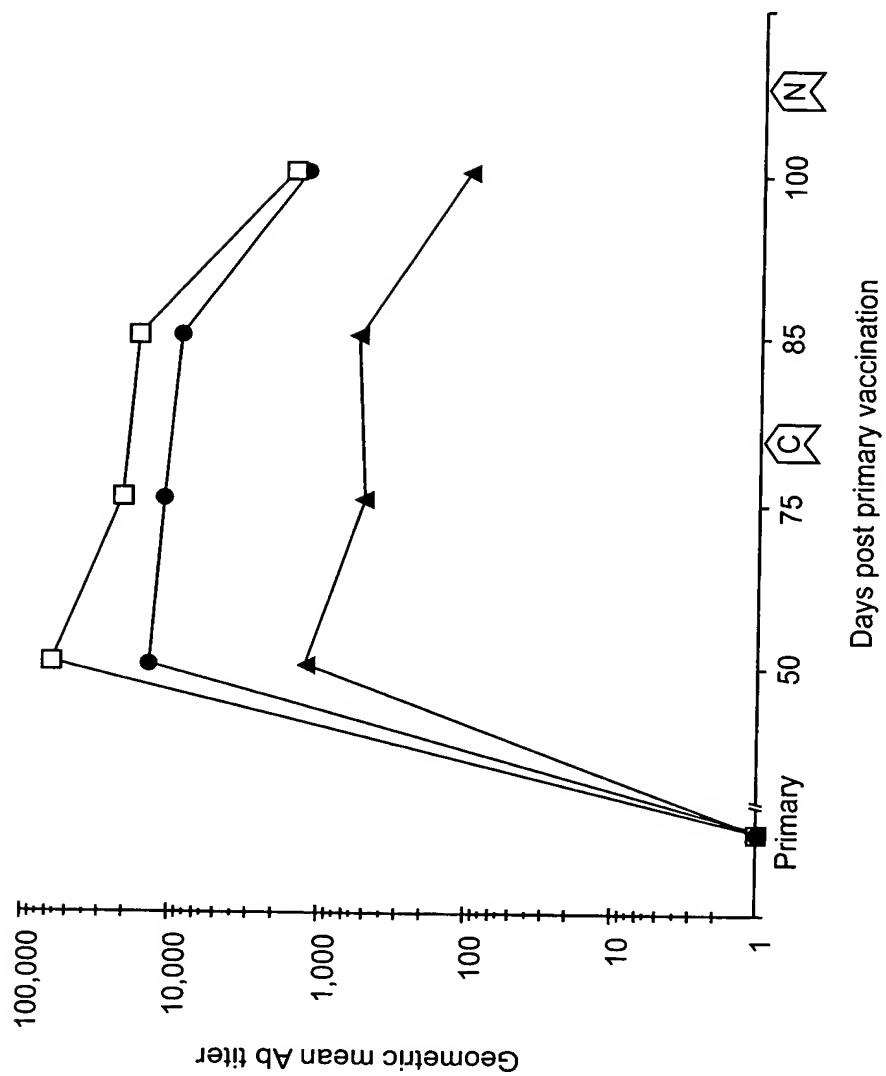


Figure 49

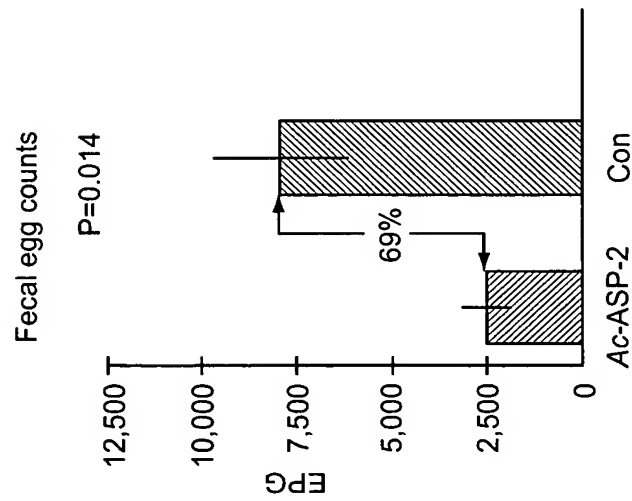


Figure 50A

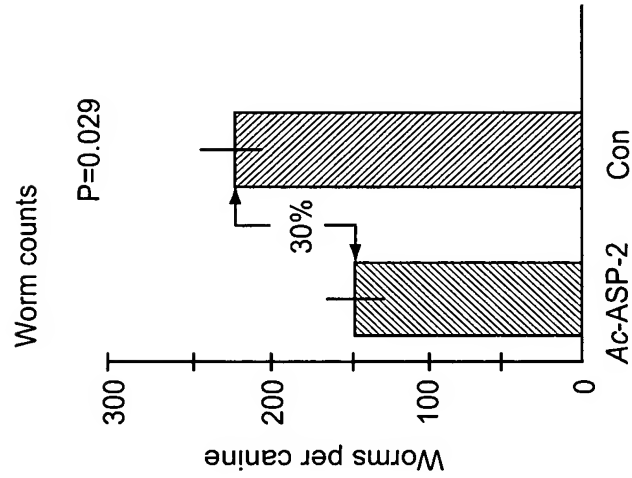


Figure 50B

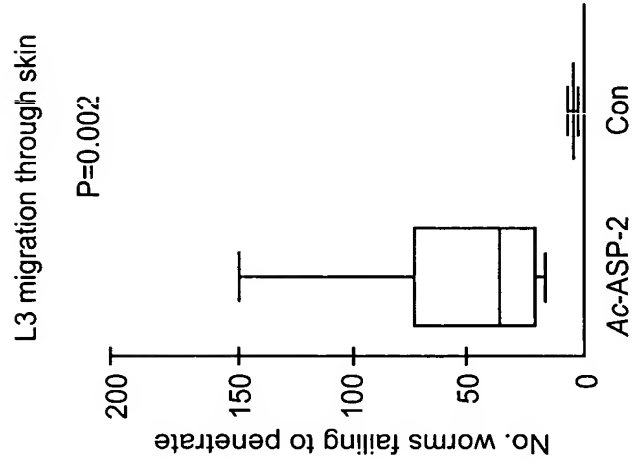


Figure 50C

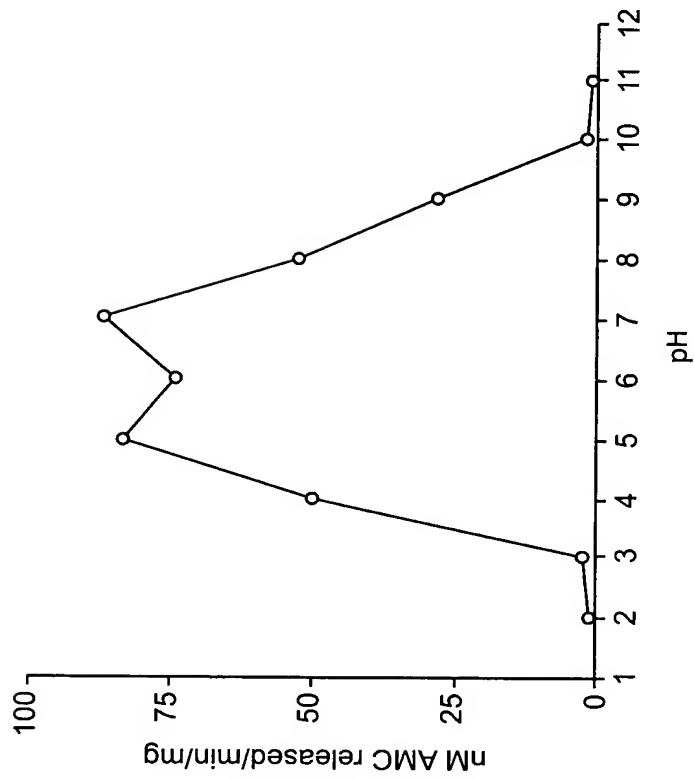


Figure 51

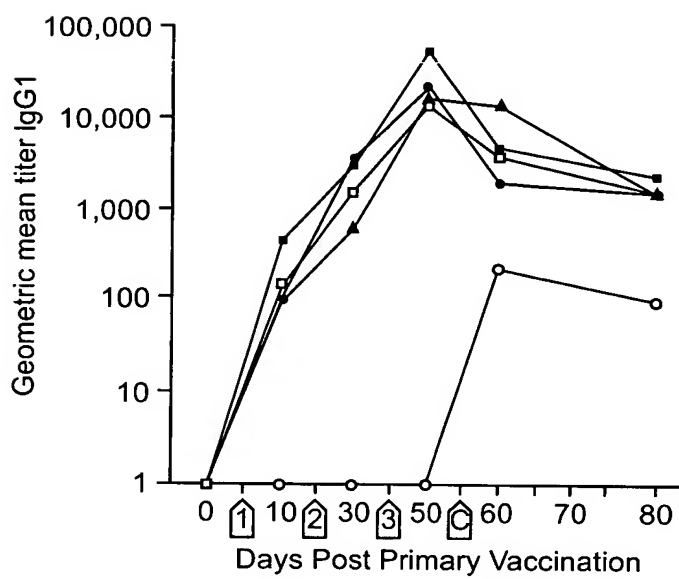


Figure 52A

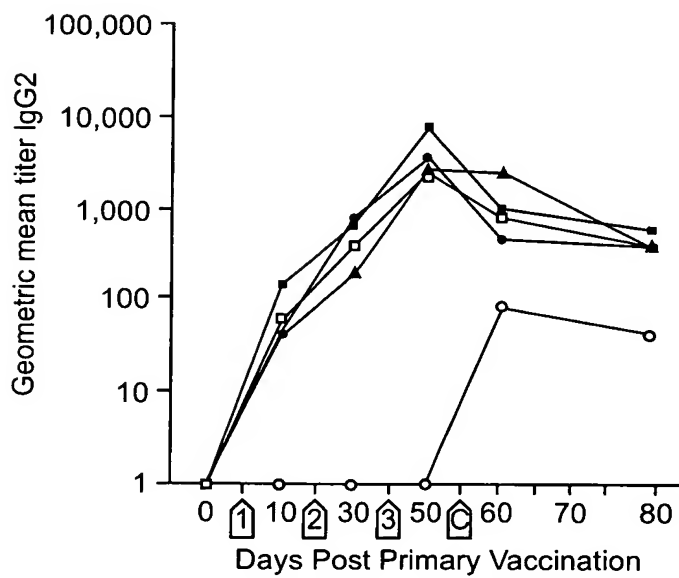


Figure 52B

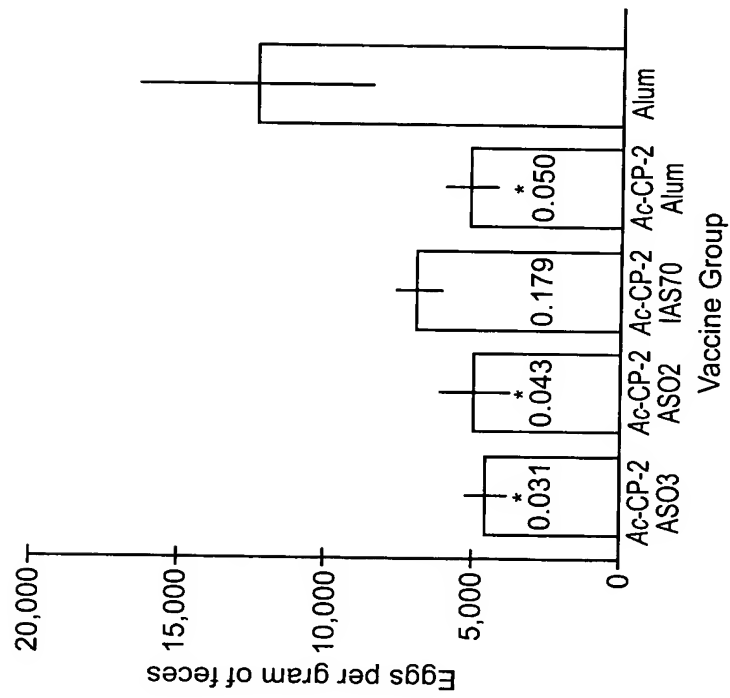
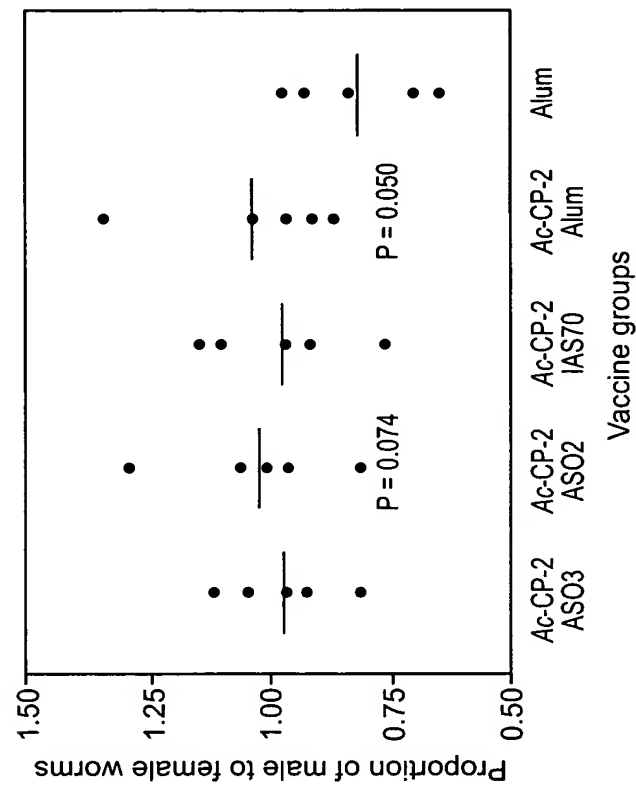


Figure 53



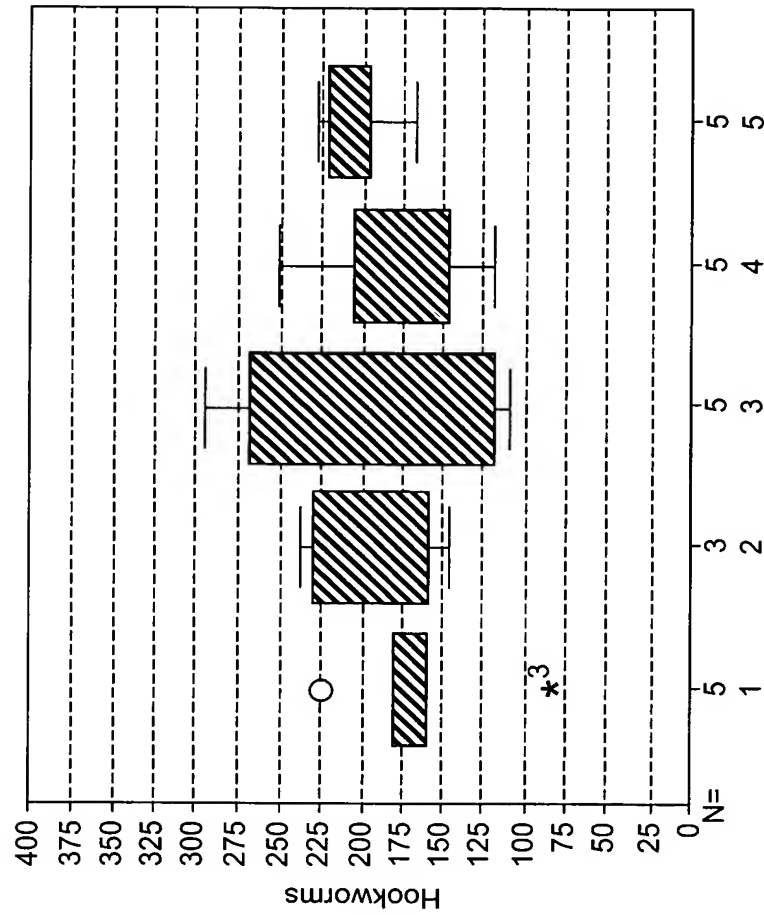


Figure 55

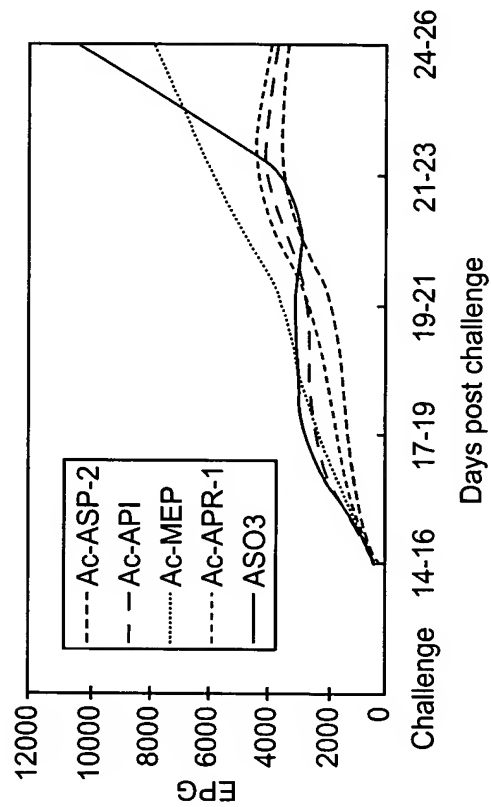


Figure 56

GAAAGGTTTAATTACCCAAGTTTGAGGTGTAAAAATGGTCCACTACAAGCTGACCTACTT
CAACGGACGTGGCCTCGGCGAATGCGCGCGTCAGTTGTTTCGCTCTTGCTGACCAACAATA
TGAGGATATTCGTGTTACACATGAGGATTTCCTCCGAGATAAAACCAAATTTGCCATTTGG
ACAACTGCCGCTGCTTAACGAGGATGGTAAAGAACTCGCTCAGTCAAACGCCATCAATCG
TTACCTGGCTAGGAAATTTCGGATTTCGCTGGCAAACGCCATTTGAGGAGGCTCTAGTGGA
CTCGCTGGCAGATCAGATGACGGACTACCGTGTAGAAATAAAACCATTCGTCTACACAGC
GTATGGACATCAGAAATTCGGTGACCTGGAGACGCTAAAAAAGGATGTGATGCTTCCTGC
ACGAGACAAGTTCCTCGGTTTCATCACCAAATTCCTTAAAGAACAACCCATCAGGATTCTT
GGTTGGTGACTCGGTGACTTGGATAGATCTATTGCTCGCTGAACATGCTTCCGACATACA
GTCAAAGGTCCCGAATACCTCGAAGGGTTTCCTGAGGTGAAGGCTCATATGGAAAAGGT
GCGATCTATTCCGAAACTGAAAAAATGGATCGAGACCAGACCGGAGACTCACTTCTGATC
GATACGCGGGATTTTTTC

Figure 57A

MVHYKLTYFNGRGLGECARQLFALADQQYEDIRVTHEDFPEIKPNLPFGQLPLLNEDGKE
LAQSNAINRYLARKFGFAGKTPFEEALVDSLADQMTDYRVEIKPFVYTAYGHQKFGDLET
LKKDVMLPARDKFLGFITKFLKNNPSGFLVGDSVTWIDLLEHASDIQSKVPEYLEGFP
EVKAHMEKVRISIPKLKKWIETRPETHF*

Figure 57B

GAAAGGTTTAATTACCCAAGTTTGAGGTGTAAAAATGGTCCACTACAAGCTGACCTACTT	60
	M V H Y K L T Y F 9
CAACGGACGTGGCCTCGGCGAATGCGCGCGTCAGTTGTTTCGCTCTTGCTGACCAACAATA	120
N G R G L G E C A R Q L F A L A D Q Q Y	29
TGAGGATATTCGTGTTACACATGAGGATTTCCTCCGAGATAAAACCAAATTTGCCATTTGG	180
E D I R V T H E D F P E I K P N L P F G	49
ACAACTGCCGCTGCTTAACGAGGATGGTAAAGAACTCGCTCAGTCAAACGCCATCAATCG	240
Q L P L L N E D G K E L A Q S N A I N R	69
TTACCTGGCTAGGAAATTTCGGATTTCGCTGGCAAACGCCATTTGAGGAGGCTCTAGTGGA	300
Y L A R K F G F A G K T P F E E A L V D	89
CTCGCTGGCAGATCAGATGACGGACTACCGTGTAGAAATAAAACCATTCGTCTACACAGC	360
S L A D Q M T D Y R V E I K P F V Y T A	109
GTATGGACATCAGAAATTCGGTGACCTGGAGACGCTAAAAAAGGATGTGATGCTTCCTGC	420
Y G H Q K F G D L E T L K K D V M L P A	129
ACGAGACAAGTTCCTCGGTTTCATCACCAAATTCCTTAAAGAACAACCCATCAGGATTCTT	480
R D K F L G F I T K F L K N N P S G F L	149
GGTTGGTGACTCGGTGACTTGGATAGATCTATTGCTCGCTGAACATGCTTCCGACATACA	540
V G D S V T W I D L L L A E H A S D I Q	169
GTCAAAGGTCCCGAATACCTCGAAGGGTTTCCTGAGGTGAAGGCTCATATGGAAAAGGT	600
S K V P E Y L E G F P E V K A H M E K V	189
GCGATCTATTCCGAAACTGAAAAAATGGATCGAGACCAGACCGGAGACTCACTTCTGATC	660
R S I P K L K K W I E T R P E T H F *	207
GATACGCGGGATTTTTTC	678

Figure 57C

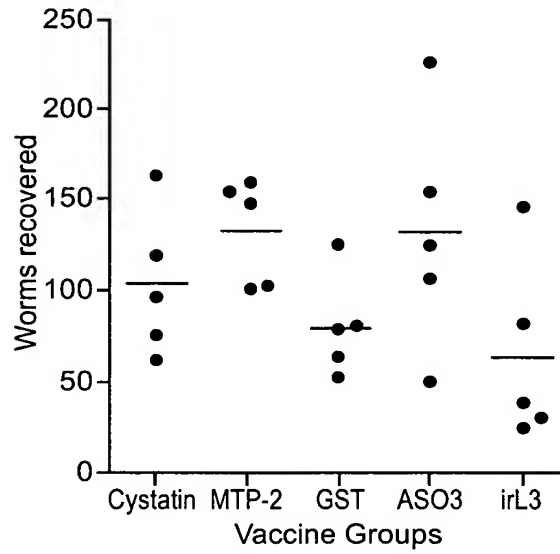


Figure 58A

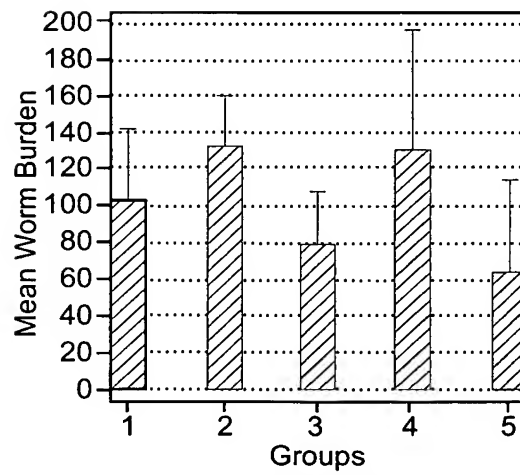


Figure 58B

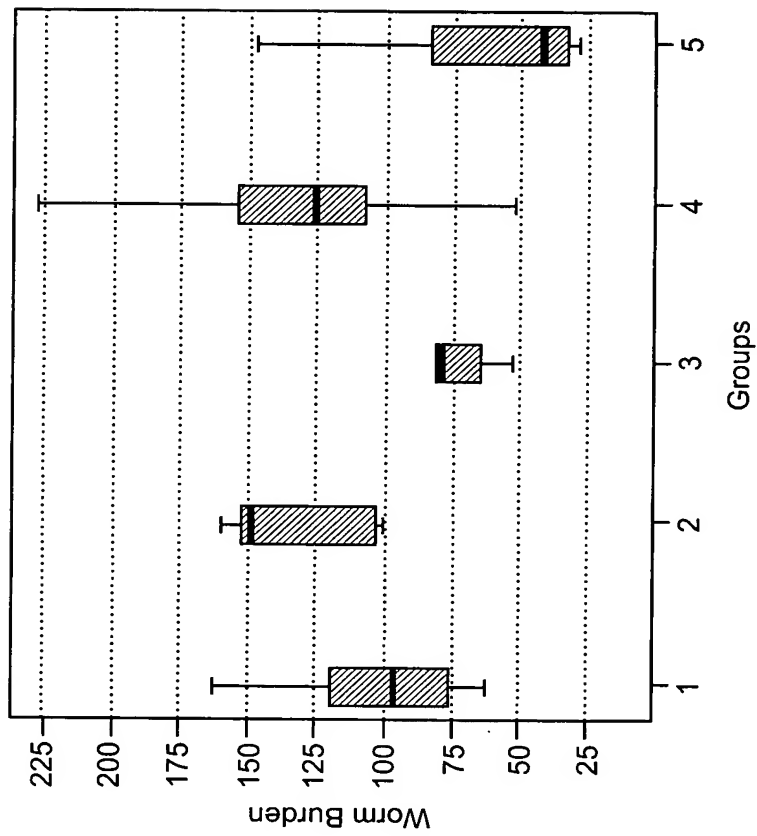


Figure 59

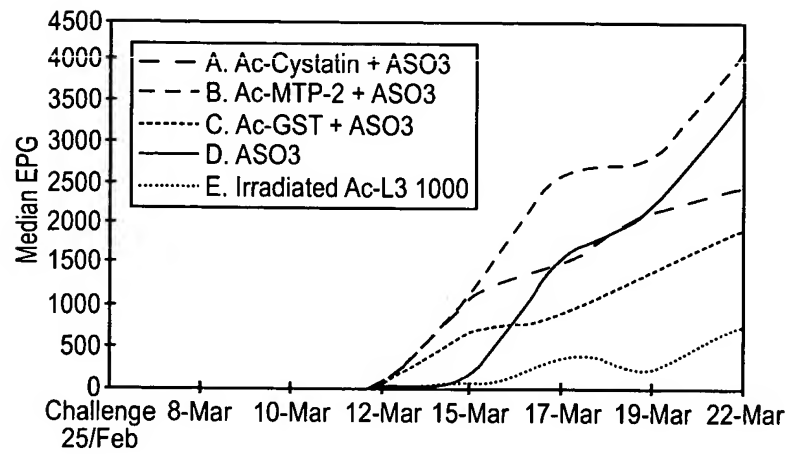


Figure 60A

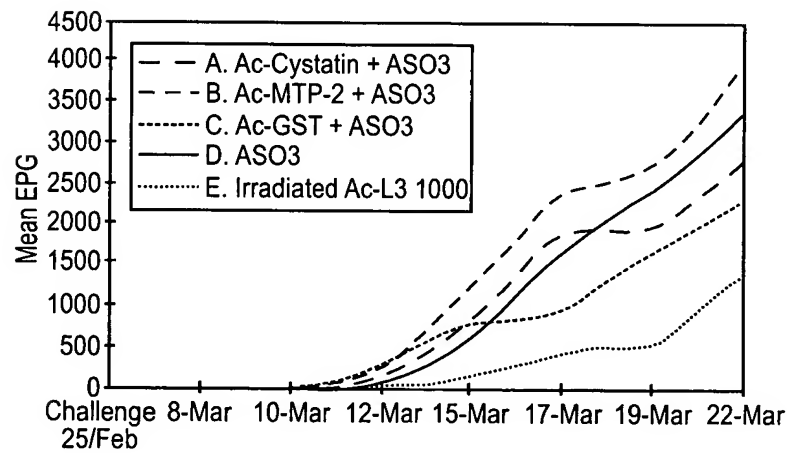


Figure 60B

GTTAAAGCCGTGTAAGCAACAGGGTTCTTTGTGATGTTAACTCTCGCTGCACTTCTGAT
TTCTGTTTCGCTGGTTGAGCCGACAGGCATAGGTGAGTTTCTTGCTCAACCAGCACCTG
CATATGCTAGAAGACTCACAGGGCAGGCCCTTGTTGACTACGTCAATTCGCACCACTCA
TTGTACAAGGCCAAATATTCACCAGATGCTCAAGAACGCATGAAATCTAGAATTATGGA
TTTGAGTTTCATGGTTGATGCGGAAGTCATGATGGAAGAAATGGACCAGCAGGAGGATA
TAGATCTCGCTGTTTCTTTACCTGAAAGTTTTCGACGCTCGTGAAAAATGGCCAGAATGT
CCTTCAATAGGATTAATCCGTGATCAGTCCGCCGGTGGAGGATGTTGGGCAGTATCCTC
AGCAGAGGTGATGACCGACAGGATCTGTATACAATCAAATGGAACAAAGCAGGTGTATG
TTTCCGAAACGGATATCTTATCATGCTGTGGACAACGTTGCGGTAGCGGGTGACCTCA
GGTGTGCCACGTCAAGCTTTCAACTATGCAATTCGTAAAGGTGTTGTCAGTGGAGGACC
ATATGGAACGAAGGGTGTGTTGCAAACCCTATCCTTTCTATCCATGCGGCTATCATGCTC
ATCTGCCATATTATGGACCATGTCCAGATGGTATGTGGCCTACGCCAACATGCGAAAAG
GCATGTCAATCCGACTATACTGTTCCGTACAACGATGACAGGATCTTCGGCAGCAAAAC
TATTGTCTTGACGGGAGAGGAAAAAATTAAGCGAGAGATTTTCAATAACGGACCATTGG
TAGCCACGTATACAGTTTACGAAGATTTTCGCTTATTACAAGAATGGAATTTACATGACT
GGTCTCGGTAGAGCGACAGGCGCACATGCAGTCAAAATTATTGGCTGGGGTGAAGAAAA
TGGAGTCAAGTATTGGTTGATTGCAAACCTCGTGGAACACTGATTGGGGAGAGAATGGCT
TCTTCCGCATGCTTCGTGGAACAAACCTTTGCGATATTGAACTAAGCGCGACTGGAGGA
ACGTTCAAGGTGTGAACGTGATCGAAAAGAACGATTTTGAACAAAAATCTTCCCGTATT
GTCATCAAAAAAA

Figure 61A

MLTLAALLISVSLVEPTGIGEFQAQAPAYARRLTGQALVDYVNSHHSYKAKYSPDAQ
ERMKSRIMDLSEFMVDAEVMMEEMDQQEDIDLAVSLPESFDAREKWPECPSIGLIRDQSA
GGGCWAVSSAEVMTDRICIQSNQTKQVYVSETDILSCCGQRCGSGCTSGVPRQAFNYAI
RKGVCSSGPGYTKGVCKPYPFYPCGYHAHLPPYGPCPDGMWPTPTCEKACQSDYTVPIN
DDRIFGSKTIVLTGEEKIKREIFNNGPLVATYTVYEDFAYYKNGIYMTGLGRATGAHAV
KIIGWGEENGVKYWLIANSWNTDWGENGFFRMLRGTNLCDIELSATGGTFKV*

Figure 61B

TTAATTCTTATTGCTCTGGTGGTGACGGCGTTGGCTCAACAGCCGCTTTCACTAAAGGA
GTATCTGGAACAGCCGATACCAGAGGAGGCAGAGAATCTTTCCGGAGAAGCGTTTGCGG
AGTTTCTGAACAAACGACAATCGTTTTTTCACGGCTAAGTACACGCCAAATGCTTTAAAC
ATTCTTAAAATGCGTGTGATGGAATCGAGATTCTGGACAATGAAGAAGGTGAAATGCT
AAAAGAGGAGGACATGGATTTTCAGTGAAGAAATTCCTGTTAGTTTTGATGCTCGAGACA
AATGGCCCCAAATGCACCTCCATAGGATTTATCCGTGATCAATCACACTGTGGTTCATGC
TGGGCAGTATCGTCAGCAGAAACGATGTCAGATCGACTCTGCGTGCAATCAAACGGTAC
AATTAAGGTACTTCTATCCGATACGGACATCCTTGCCCTGTTGCCCCGAATTGTGGTGCTG
GATGTGGAGGAGGCCACACAATTCGAGCGTGGGAATATTTTAAGAACACAGGCGTTTGC
ACTGGCGGACTATATGGAACAAAGGATTCCTGCAAACCATACGCTTCTATCCATGTAA
AGACGAAAGTTACGGAAAGTGCCCCAAGGATTCCTTTCCAACACCAAATGTCGAAAAA
TTTGTGAGTATAAATACAGTAAGAAGTACGCCGACGACAAATACTACGCGAATTCCGCA
TATCGAATTCACAGAATGAGACGTGGATCAAATTGGAGATCATGAGAAACGGGCCTGT
GACAGCATCATTTCAGGATTTATCCGGATTTTGGGTTTTACGAAAAAGGAGTTTATGTGA
CTTCAGGCGGAAGGGAACCTAGGTGGGCACGCGATTAAAAATCATTGGATGGGGAACGGA
AAAAGTAAACGGAACCTGACCTACCTTACTGGTTGATTGCTAACTCTTGGGGTACTGACT
GGGGAGAGAATAACGGCTATTTCCGCATACTTCGCGGACAAAATCACTGCCAAATAGAA
CAGAAAGTTATCGCCGGTATGATAAAAGTACCACAACCGAAATCCGCCGGTCCACCACT
TCAACCCAATCCTTCAAGCTGAACCAAGTTGTAGTATTGTCCCCATCAATCCAAGCATT
TCTTGGGGTGATACTTTTACGAATAAAACTACATTATAAAAAAAAAAAAAAAAAAAAAA

Figure 62A

LILIALVVOTALAQQPLSLKEYLEQPIPEEAENLSGEAFAEFLNKRQSFFTAKYTPNALN
ILKMRVMESRFLDNEEGEMLKEEDMDFSEEIPVSFDARDKWPKCTSIGFIRDQSHCGSC
WAVSSAETMSDRLCVQSNGTIKVLLSDTDILACCPNCGAGCGGGHT1RAWEIFKNTGVC
TGGLYGTKDSCKPYAFYPCKDESYGKCPKDSFPTPKCRKICQYKYSKKYADDKYYANSA
YRIPQNETWIKLEIMRNGPVTASFRIYPDFGFYEKGVYVTSGGRELGGHAIKIIIGWGTE
KVNGTDLPYWLIAANSWGTDWGENNGYFRILRGQNHQCIEQKVIAGMIKVPQPKSAGPPL
QPNPSS*

Figure 62B

TCGTTGAGGCGTTATTTCAAGCTTCTCTCGCCTCGATTTTCAGATTCTCCAATTGTTTCA
GTGAATCGTGGAACAGTCAATCTCACTTTTGTGAGATCCAATGAAAGCTAATTTTGCGT
TGGTCGTCGTCCTTCTGGCAATAAACCAGTTATATGCAGATGAGCTGCTTCACAAACAA
GAGTCCGAACACGGACTTAGTGGCCAAGCGCTCGTTGACTACGTTAATTCGCACCAATC
ACTTTTCAAAACAGAATATTCGCCAACCAATGAACAATTCGTTAAAGCCCGTATAATGG
ACATAAAGTATATGACTGAGGCTAGCCACAAATATCCAAGAAAGGGCATTAAATCTGAAC
GTTGAACTCCCTGAAAGGTTTGACGCACGTGAAAAATGGCCACATTGCGCCTCCATCGG
TCTCATTCGCGATCACTCTGCTTGCGGATCGTGTTGGGCTGTATCGGCAGCGTCGGTTA
TGTCAGATCGACTCTGTATCCAGACGAACGGCACAAACCAGAAGATCCTTTTCGTCGGCG
GACATCCTTGCGTGTTGTGGAGAAGACTGTGGCTCAGGATGCGAAGGCGGTTATCCGAT
TCAGGCGTACTTCTACCTGGAAAATACTGGAGTATGTAGTGGAGGAGAGTATCGAGAAA
AGAATGTATGCAAACCATATCCCTTTTATCCGTGTGACGGAAACTATGGACCATGCCCC
AAGGAGGGTGCGTTCGACACTCCAAAGTGTGCGAAAATATGTCAGTTCCGATATCCTGT
TCCATACGAAGAAGATAAAGTGTTTGGAAAAAATTCACACATCCTTCTGCAAGACAACG
AGGCAAGAATCAGACAGGAAATTTTCATAAACGGACCAGTGGGAGCTAATTTTTTACGTT
TTCGAAGACTTTTATACTACAAGGAAGGGATTTATAAGCAGACATATGGGAAATGGAT
AGGAGTACATGCAATCAAACCTTATTGGTTGGGGCACAGAAAATGGAACAGATTATTGGT
TGGTTGCTAACTCGTACAACACTACGACTGGGGAGAGAATGGCACCTTCCGCATTCTTCGT
GGAATAATCACTGTTTGATAGAATCACAAGTGATCGCAACGGAGATGATTGTATGAAT
GTCTAATGAACGATTGGTCGCATGCCGATCTCTGAAGTAAATGTGTTAATCAAAAAAA
A

Figure 63A

MKANFALVVVLLAINQLYADELLHKQSEHGLSGQALVDYVNSHQSLFKTEYSPTNEQF
VKARIMDIKYMTEASHKYPRKGINLNVLPERFDAREKWPHCASIGLIRDHSACGSCWA
VSAASVMSDRLCIQTNGTNQKILSSADILACCGEDCGSGCEGGYPIQAYFYLENTGVCS
GGEYREKNVCKPYPFYPCDGNYGPCPKEGAFDTPKCRKICQFRYPVPYEEDKVF GKNSH
ILLQDNEARIRQEIFINGPVGANFYVFEDFIHYKEGIYKQTYGKWIGVHAIKLIGWGE
NGTDYWL VANSYNYDWGENGTFRILRGTNHCLIESQVIATEMIV*

Figure 63B

TAGATAATAATCTTTTTGCACGTCAGAGAATTTCTTTGATAAAACCACAATTAAACAAT
CTCAGCGCTGTAAACACGTGCAAACTACTCGTTCATTTCTCTTCACTTTCCCTCCAAA
ACCAAACATTCAAGAGAAGCATGATAACCATCATTACCCTATTGCTTATCGCTTCTACA
GTGAAGTCACTAACAGTGGAGGAGTACTTGGCCCCGACCAGTGCCGGAATATGCCACAAA
ACTGACAGGACAAGCCTACGTTGACTATGTTAATCAGCATCAATCATTCTACAAGGCTG
AATATTCCCCGCTGGTTGAACAGTATGCCAAAGCTGTGATGAGATCTGAGTTTATGACG
AAGCCGAACCAAAATTATGTGGTGAAGGACGTAGATCTAAACATCAATCTTCCAGAAAC
CTTCGACGCAAGGGAAAAATGGCCAACTGCACATCAATAAGGACAATTCGCGATCAGT
CCAATTGTGGATCATGTTGGGCAGTATCAGCGGCGTCGGTAATGTCAGATCGTTTATGC
ATACAGTCGAACGGCACAATACAGTCATGGGCTTCTGATACGGATATTCTATCATGTTG
CTGGAATTGCGGAATGGGATGCGATGGAGGTAGACCGTTTGCGGCGTTCTTTTTTCGCGA
TAGACAATGGTGTATGCACTGGAGGACCTTTCAGAGAGCCAAACGTGTGCAAACCATAC
GCTTTCTATCCATGCGGTGCGCCACCAAAACCAGAAATACTTCGGACCTTGTCCAAAAGA
GCTCTGGCCCCACTCCAAAATGTGCGGAAAATGTGTCAACTAAAATATAATGTGGCCTACA
AAGACGATAAAATTTACGGGAATGATGCATACAGTCTCCCTAACAATGAGACACGAATC
ATGCAAGAAATTTTACAAATGGACCTGTAGTGGGATCATTGAGCGTGTGCTGACTT
TGCAATTTATAAGAAAGGAGTATATGTGAGTAATGGAATTCAGCAGAATGGGGCTCATG
CAGTCAAAATTATTGGTTGGGGTGTGCAGGATGGACTAAAATATTGGTTGATTGCTAAT
TCCTGGAACAATGACTGGGGAGACGAAGGCTATGTCCGGTTCCTTCGTGGAGATAACCA
CTGTGGAATTGAATCAAGGGTGGTGACAGGAACATGAAAGTGTAACAATAATTAGT
CTTTTCCTGACGATTTCAAATAAAATCTTTGCCACTAAAAAAAAAAAAAAAAAAAAA

Figure 64A

MITIITLLLIAS TVKSLTVEEYLARPVPEYATKLTGQAYVDYVNQHQS FYKAEYSPLVE
QYAKAVMRSEFMTKPNQNYVVKDVLNINLPETFDAREKWPNCTSIRTIRDQSNCGSCW
AVSAASVMSDRLCIQSNGTIQSWASD TDILSCWNCGMGCDGGRPF AAF FFAIDNGVCT
GGPFREPNVCKPYAFYPCGRHQNKYFGPCPKELWPTPKCRKMCQLKYNVAYKDDKIYG
NDAYSLPNNETRIMQEIFTNGPVVGSFVSFADF AIYKKG VYVSNGIQQNGAHAVKIIGW
GVQDGLKYWLIANSWNNDWGDEGYVRFLRGDNHCGIESRVVTGTMKV*

Figure 64B

ATTTTCAATGACCAAGCTCCTCGTAAGCACCGCCGGGTTGACTGGCGTCGTCGCGGCCC
TCTTCATCACTTCTCTGGTTTTTCAGCATCCTTACATGGACACGTGTAAAAAATGACAAC
GATAACCCACCAAGACCTAAGGAGCCACTCAGTCGTCCAGTAGTGCAATTGTCTTCATC
TATTCAGACTACCGTAACCGAAAATGTAGTGACAGAACCATAGTGACTGTGCCGACAG
TGTCACGCACCAGAGTTTCGGCAAAAACAATATCACCGAGAAGTTCCGCGACAACGTCA
ACTCGAACGCTTCGAACCTCTCACCACACCGAAAATTCGTTCGCAACGGAGGCCGCACCGCG
ACGTAATCGTACGATAATGTGTCCGAACCTATGGAGTTTTTCAGACAACCTCATACGCATACC
AGGAAGCAGCATCGTTCATTCTTAGTGGCCTCGACGAACGTGTCAATCCGTGCGAAGAT
TTCTACGCTTTCACTTGTAAACAAGTTTTCTAAAAGATCATAAGGCTGAAGAACATGGGGT
CAGTCGTTACGGAGCTATAAAAGAACTTCAAGATGCAGTGAACACAGAAAATAGTTGACG
CCCTCTTCGATGTGGATGTGAACGATAAGAAGCGGTGAGAAACAGAGAGAATAACGAAA
GCGCTTCTCCACGACTGCGTTTACCACATCTCGCCTAATGTTCCGACCGAAACAATCAT
TAATTTCCCTTGAAGAAATTGCAAGAATGTTTGGAGGTATACCGTTCCTCAACCACACTC
TAAAAGAAGATTTTGACGTTTTTCGTGCAATGGGAGAAGTCGAACAAAATCACGCGATG
GGTACGCTTTTCAGCGCAATGGTTTTCGGTGCGACTACAAGAAGATCAAACAGAATTCACT
GTTCTTATCACAGCCTCGGCTTCCGATGCCAAGAGAATTCTACGTGCTTCCACAGTTTA
CGATGAAGCTTAAAAAACGTGGACTTCAAATTGCTGACGTTTTAAAGAAATTTGCCGAG
AAGATCTTAGAAGAACCCGATAAGTATAGGGATATGATAGAAAAGGCTGCGCAAGATGT
TGTGGAAGTAGAGAGGAGGATCGCTCTGGCGTCTTGGGCAGATGCCGAAATGAGAACT
ACGCACAACAGTACAATCCCTACGATCTGCCCACCTTTGAAAAAGGCGTATCCATCTGTC
AAATGGGAGAGCTATCTACGTAGCCTTTTGTCAACCGTCGGTCCAGTCGATTTTTCTG
TCCACATAAACGGCTCATAATCTCGCAACCGTCGTATTTTGGGTGGTTGAATGCTCTCT
TCAATGGTAACGTTGTTGACGAAAATACGATAGTAACTATATAATCACGCACTTAATC
TTGGAAGATGCGGAATTCCTTGGTGGTATATTTAAAGAATCTGCAGAGGATTTAAATTA
CGTCCGGTATGCGCAGAGAAGTGGCAGAGGAGTTGCCCGAGTTGGAAGGCAACTTATGC
ATCAAAGAGATACCAGGGGCGACCCGAATATCCCGTGCATGAATTTTCATCATGACGTAC
ATGCCGTATGGACCTGGTTATGTCTATGTAAGAAGCAAACAGCAGAGAAACGATGTTCA
AGCAGACATTAGGAAACAAACAGAACTCGTCATCGAGAGCTTTCTGAATATGACTTCGG
GCCTGAAGTGGATGTCTTCGGATTGCAAAGAAAAAGCTAGACAGAAGGCTAAGGGTATG
GTGAGGAAGTACGGATGGCCTCAAAAACCTTTCGGAGACTTTAAAGCAGCGAAGAGAT
TGATGAATATCACAAGAAGGATTATGCTGAAATCCTTGAGCTTACCAAGACGGAGAGGA
GCAGCCTTCGATATTACCGTATGCGCCGGGTGCTGATTAAAGGATATTCAAATCGCGAG
TCACTGCGTTTTACTTTTGCAGGATGCAGACAGGTCCAATTTCTCCTATCACCAGCGTT
AGTGAGCGCCTGGTACCAGCCGGAAGGAACCTCTATCACTTTCCCTTACGCGAGCTTCA
ATCCACCGTACTATAGCTATGAATATCCTCAAGCTTACAACATATGGTGGTCAGGGTGGA
ACTGCCGGTCATGAGCTAGTCCATGGATTTGACGACCAAGGAGTGCAGTTCGGTCCCGA
TGGAAGTCTAAGTAGGTGTACGTGGTATGATTGTGGATGGATGGATAAAAGATCAAAAG
ATGGTTTCAACGACATGGCCCAATGTGTTGTAACACATTATAGCACTTTCTGCTGCCCA
GAACAGGAAGGTAAATATACACTGCGCAAATGGTGCAACCACACAAGGGGAAAATATTGC
TGATATTGGAGGTGAACATGCTGCATACATAGCATATCGAGAGTACATCAAATCACTAG
GACATGAAGAGAAAAGATTGCCAGGATTAGAACGATACACACCAAACCAGATCTTTTGG
ATTACATATGGATACTCATGGTGCAGGAGCGTAACAGAGGAATACCTTATTAGTCAACT
TCTCACCGACCCCCACGCACCAAGTGCTTGCCGCACTAACCAAGTAGTCCAAAGTATCC
CTGCGTTTTGGACGGGATTTTCGGGTGCTCATTAGGAGACAGAATGTATCCTGCACCAGAG
CAGCGATGTTTCAAGTTTGGGTTCAGAGTAAATGGTTCGACGAAACTGTCGGATTTTATG
TTTCAGTCGGATTATAACACTATCAACTAAACATTTTCGTTCAAAAAAAAAAAAAA

Figure 65A

MTKLLVSTAGLTGVVAALFITSLVFSILTWTRVKNDNDNPPRPKEPLSRPVVQLSSSIQ
TTVTENVVTEPIVTVPTVSRTRVSAKTISPRSSATTSTRTLRLTTPKFVATEAAPRRN
RTIMCPNYGVSDNSYAYQEAASFILSGLDERVNPCEDFYAFTCNKFLKDHKAEEHGVSR
YGAIKELQDAVNTEIVDALFDVDVNDKKRSETERITKALLHDCVYHISPNVPTETIINF
LEEIARMFGGIPFLNHTLKEDFDVFAAMGEVEQNHAMGTLFSAMVSVDYKKIKQNSLFL
SQPRLPMPREFYVLPQFTMKLKKRGLQIADVLKKFAEKILEEPDKYRDMIEKAAQDVVE
LERRIALASWADAEMRNYAQQYNPYDLPTLKKAYPSVKWESYLRSLSTVGPVDFSGPH
KRLIISQPSYFGWLNALFNGNVVDENTIVNYIITHLIFEDAEFLGGIFKESAEDLNYVR
YAQRSGRGVARVGRQLMHQRDTRGDPNIPCMNFIMTYMPYGPYVYVRSKQQRNDVQAD
IRKQTELVIESFLNMTSGLKWMSSDSKEKARQKAKGMVRNYGWPQKLFGDFKSSEEIDE
YHKDYAEILELTKTERSSLRYRMRRVLIKGYSNRESLRLLLQDADRSNFLSPALVS
AWYQPERNSITFPYASFNPYYSYEYPQAYNYGGQGGTAGHELHVGFDQGVQFGPDGS
LSRCTWYDCGWMDKRSKDGFNMAQCVVTHYSTFCCPEQEGNIHCANGATTQGENIADI
GGEHAAYIAYREYIKSLGHEEKRLPGLERYTPNQIFWITYGYSWCRSVTEEYLISQLLT
DPHAPSACRTNQVVQSIAPAFGRDFGCSLGDRMPAPEQRCSVWVQE*

Figure 65B

GAAAAGCCTACGCAGTCATGCTCAAACCTCGTCGCCCTAGCCTGCTTAGCTGCGATCTGC
CTCGCTCAGGGTGGACCCGAAGGACCCCTCCTTTCTCCTGAAGAGTGCTCCCCCGAGAA
GGTGAAGGAATTTCGACGCTCTTTTCGCCGATGCTGGAGGTCTGACTGATGCCAGATCG
ACGCTAAGGTCAAGGGATGGATCGGAAAGCAGAGTCAGGATATCCAGAACGCATTCAAT
GCCTTCGAGAGTGAGGTGAAAGCCGCCAGCAACAGGGTGAGCAAGCTCACCAGGCTGC
TGTCGCCAAATTTCAGCGCTGAAGCCAAGGCTGCCGACGCCAAGCTCACCGCTATCGCCA
ATGACGCCTCCAAGACGAATGCACAGAAGGGAGCCGAGATCGACGCCGTTCTCAAGGGT
CTTCACAAAAAGTCCGTGATGAAATCGAGAATGCAATGAAGGGATAAGAGGGCGTTGT
TTTGTATATATGAACCGATAAATATGCAAAATAAATATCTCCCTTCAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAA

Figure 66A

MLKLVALACLAACLAQGGPEGPPFLKSAPPEKVKEFDALFADAGGLTDAQIDAKVKG
WIGKQSQDIQNAFNAFESEVKAAQQQGEQAHQAAVAKFSAEAKAADAKLTAIANDASKT
NAQKGAEIDAVLKGLPQKVRDEIENAMKG*

Figure 66B

CAGTCATGCTCAAACCTCGTCGCCCTAGCCTGCTTAGCTGCTATCTGCCTCGCTCAGGGT
GGACCCGAGGGACCCCCTCCTTTTCCTGAAGAGTGCTCCCCCGAGAAAGTGAAGGAATT
CGACGCTCTTTTCGCCGATGCTGGAGGTCTGACTGATGCCCAGATCGACGCTAAGGTCA
AGGGATGGATCGGAAAGCAGAGCCAGGACATCCAGAATGCATTCAATGCCTTCGAGAGT
GAGGTGAAAGCCGCCCAGCAACAGGGTGAGCAAGCTCACCAGGCTGCTGTCGCCAAATT
CAGCGCTGAGGCCAAGGCTGCCGACGCCAAGCTCACCAGCTATCGCCAATGACGCCTCCA
AGACGAATGCGCAGAAGGGAGCCGAGATCGACGCCGTTCTCAAGGGTCTTCCACAAAAA
GTCCGTGATGAAATCGAGAATGCAATGAAGGGATAAGAGGGCGTTGTTTTGTATATATG
AACCGATAAA

Figure 67A

MLKLVALACLAALCLAQGGPEGPPPFLLKSAPPEKVKEFDALFADAGGLTDAQIDAKVKG
WIGKQSQDIQNAFNAFESEVKAAQQQGEQAHQAQAVAKFSAEAKAADAKLTAIANDASKT
NAQKGAEIDAVLKGLPQKVRDEIENAMKG*

Figure 67B

1 tttgagatgt ggattctcgc tgcattagt gtaacggcac ttgccgcaaa accgactacg
61 gttgaggagt tccacgctca accatatagag gagcacgtta aagacctcag tggacaagct
121 tttgttgact acatcaacga gcatcaatct ttctataggg cggaatatct accagaggcg
181 gaagcgcttcg tgaagctcgc gataatggac tcgaagtatt tagtgaacc taagaaagaa
241 gaagtgcctgg aggacgtata tggcaatgat ccgcctgcga gcttcgacgc tcgacccac
301 tggcctgaat gcagatccat tggcaccatt cgtgaccagt catcatgcgg ttcatgttgg
361 gcagtatcct cagcgggaagc catgtcggat gaaatatgtg ttcagtcgaa cagtacgata
421 aggtgatga ttccgactc agatatactc tcgtgctgtg gaatttcttg tggatatgga
481 tgccaagggtg gttggccgat cgaagcatac aaatggatgc aacgtgacgg tgttgttaca
541 ggtggaaaat acagacagaa gaaagtgtgc aagccgtacg ccttctatcc gtgtgggcac
601 caccaaaatg accctacta tggaccttgc ccagggggtt tatggccac tccaaaatgt
661 cgaagacgt gtcagcgaat atacaacaag tcctaccaag aagacaagca ctttgcaacg
721 agggcctact acctcccgaa taatgaaagg aacatcaggc aagagattta caagaacgga
781 cctgtggtcg cagctttcag agtctaccag gacttcagtt attacaaaa aggaatctat
841 gtgcacaagt ggggtgttca aacaggagca catgctgtca agtcgttgg ttggggcaga
901 gaaaatgcaa cagattactg gctgattgag aactcgtgga acactgactg gggagaaaagc
961 ggctatttcc gtattgttcg tsgaactaac gagtgcggta tcgaagcaca aatggtcgg
1021 ggagcgatga gagtgtgaaa tactcgacta tgacgccgtt ctttaatcgg ctatcgtaat
1081 gaatcattct gag

Figure 68A

MWILAAVLVVTALAAKPTTVEEFHAQPIEEHVKDLSGQAFVDYINEHQSFYRAEYSPE
AEAFVKARIMDSKYLVEPKKEEVLEDVYGNPPASFDARTHWPECRSIGTIRDQSSC
GSCWAVSSAEAMSDEICVQSNSTIRVMISDSILSCCGISCGYCGQGGWPIEAYKWM
QRDGVVTGGKYRQKKVCKPYAFYPCGHHQNDPYGCPGGLWPTPKCRKTCQRKYNK
SYQEDKHFASTRAYYLPNNERNIRQEIYKNGPVVAAFRVYQDFSYKKGIYVHKWGGQ
TGAHAVKVVGWGRENATDYWLANSWNTDWGESGYFRIVRGTNECGIEAQMVGGAMR
V*

Figure 68B

TTTAATTACCCAAGTTTGAGCAGCATGCCATACCTCGCATTTCATTGTCGCACTACTAGC
CTGTACTGTTATGTCGGGTCACGGTCAAATGACGGGAGGATTAACGAAGCAGGATCCCA
ATGATCCTGAACACATGGCTAGAGCATGGAAGGCCGCAAAAGGCATCAATGAGGACGCT
TCTAACGCTGGACCGTACCACATGATTCCTATTAAGATCGTAAAGGCCGAATCTCAAGT
TGTCGCTGGAGTTAGGTACATATTTGAAGTGCTGTTTCGGCGAATCCACGTGTAAGAAAG
GACATATGGCTGCAACCGAACTTTCTGCCTCCAACGTGAGCTGAAAGAAGGAGGAAAC
CGAGCTCTATACAAAGTTGAGCTTTGGGAGAAGCCATGGGAAAACCTTCGAGCAGTTCAA
CGTGGAGAAGATCCGAAATGTTGCCGCCGGCGAGCAAATCTAGCCGCTTCTTTAAGACA
CCTCACTGCGCCGGCGTCTATAT

Figure 69A

MPYLAFIVALLACTVMSGHGQMTGGLTKQDPNDPEHMARAWKAAKGINEDASNAGPYHM
IPIKIVKAESQVVAGVRYIFEVLFGESTCKKGHMAATELSASNCELKEGGNRALYKVEL
WEKPWENFEQFNVEKIRNVAAGEQI*

Figure 69B

TTAGTTTTGCAAGGGTTTGGTGCAGGAACTGGGATCAACTTCGAGTTTGCTAACGAGA
CTCTTAACCGATCCTCATTACCAGCACCTTATCGCGTTCTTGGAACGCTGCAGAACTT
CCCCGCATTTAAAGAAGCCTTCAATTGTCCGAAATCACCTTACGCACCAGATAAACACT
GTAACGTCTGGGTATCGGAGCTAGATACATCACATGGTGAGCCCCAAGGTAAAAACAGAG
CTGAATATAGCGGCGCCTCCACAGATCACTCCGAACGACAAGGAAAAGTATGATGCCGC
CAAGGTGGCCATCAGTTTCTTTCAGGAATCCGTCAATACCTCTGTTGATCCATGTGAAG
ATTTCTACAAGTATGCTTGCGGAAAGTACCAAAAAGCGGTCTCCTTCCACTATGCCGAC
GCTAAAAACCTCGTAGCAATGGCTAACCAATTGACAAATAAGGACTACCAGAAAGTTAT
CAAGAGCTCAACAGCATTAAACCAAGGAGAAGGCGTTCTTCGATGCGTGCGTAGCTGCAA
CGAAAGACTCTGGTCACAATAATCAGATCCTCATTCCAATAATTATCTCATGAAACGA
GTAAGGAAGTTGGCTGACTACCTTGGAGCTGAGTTTACCTATGCACCTGGCGGCAGAGT
GGAGCGACTGCCCAATAAGGTTTCAGCTGGCAAACGCTTTGGGTTACCTCTCCTTTGACC
AGAACATTCAAACGCTGGTGACACCTCTTGTCGACACATATTGGCCAGACCCGAATAAA
GGATACACGATGTTCTCGATCAGAATACTGCATATATGAGCAAGACTTTCTACCACCC
GGATGCTTTCAAACCATTAAGGAAAACCTATATTAATTCTGCGACTAAGGTCATAGAAA
CGTTTCGTAAAAACTCAGAATAAACCGATTGATCCTAAACTCAAGGATAAGGTGAGAGGC
CTGGTGGAATTTGAACAAATGATCGCGAACAAGTACAGCACCGATGATGACACACGCCG
AATCTACTTTCGATCATGGAATCTCAGAAGCATTAGGGAGCTACAGAACCAATTTGGTT
TCGTTGATTGGCAAACATATATGAAGATGGTTCCCATGGTTGCGCAAACAAGGTGCAA
TCTGCGGATTTCAGAGTTTCCGTTCATGGAGCCGGGTCAGTACGCCAACATGAGTCGTGA
TTATGCTGGATTTGACAAAGAAAACTAGTGAATACTTGTATGCGCCTGCTGCTAT
CTAATGCTCAGTATTTGCCAACCTATGCCAGCAGTTTCAAAGAGATGCCGGAAGAACCA
CTAGTTCTTGGACGGAAGCGACGCAACATCCATTTCTCAAATCCGACACCCTTACTGA
TACGCAAGCGAATTGTGCAAAGGTGGCGAATGAGCTGATGATGTTTGCGAATGGACGAG
TTTTTCGTCGACTATGTGTATCCCGACGAGAAATACAAGGACCTAATAAGGAGCAGTGCT
GGTGGTGTGATGCACAATGTTATCCATGCTTTCCAAAGCATGGTTGATCAACTTGACTG
GATGAGCGAAGCGACAAAGAGAAAAGCAATAGAAAAGAGCATGAATATCATAACAAACA
TAGCTTTCCCGGATTGGATTATGGACAACGCAAAGTTGGACCTGTATTACAAAAGCATC
ACCTTCGACCCAACCAAGGAAAACCTACTACGATATTTGGACAAAGCTTACCATATTCAA
TATAGAAGCTCAGTACAAGCACTTAACAATGGCCACAGCTGATTACGAAGAATTCCCTTA
TGCCGCCAGGTATTGTTAATGCATGGTATCAGCCGGAATTGAATACGATCACATTCCCC
GCTGGAATACTTCGTCCTCCTTATTTCCATCCTGATTGGCCAGCATCAATCAAATACGG
TGGAATTGGTCTAATAGCAGGACATGAACTGATTCACGGCTTTGACGATCAAGGTGTTT
AGTGGGGTCCAAAGGGACACATCTCTTACCCAGAGAAGAACTGTATTGGATGGATGGAT
GAGCAATCAACGAAAGGTTTCAATCGCTTGGCTCAATGTGTTCATCGATGAGTATAGCAC
GTTCTGCCCTCTTGACAACAGGACATACACACCAAATTGTGTGAATGGAGCGCAGACCC
AAGGAGAGAACATCGCCGATAATGGAGGGGTACACGCGGCGTTCCGCGCTTACCGTACA
CACATCTCTCTCAATGGACCAGATCCACAGCTTCCTGACAGACTGTTCTGGGCAGTTTAC
ACATGATCAGCTGTTCTTCTTGAACCTTCGCACAGGTGTGGTGCGAGAAACGACGAGTCG
ATGACAGACTTTACCAGCAGCTCATGGTTGACCCCCACTCTCCAGCGATGTACCGAGTG
TTCGGTACTCTTCAGAACTATCCGGCCTTCAGAGCCGATTCAACTGTCCGCTTAATTC
GCGATACGCTCCTAAGGATCATTGCAATGTTTGGGTGCCGAATTATATGCCATAAGAGG
AAGTTCTTCTTGAAAACCTACTACTCAACATAAATAAAGTCTGTGATTTTAAAAAAA
Aaa

Figure 70A

SFARVWCRKLGSTSSLLTRLRLTDPHSPAPYRVLGTLQNFPAFKEAFNCPKSPYAPDKHC
NVWVSELDTSHGEPKVKTELNIAAPPQITPNDKEYDAAKVAISFFQESVNTSVDPCED
FYKYACGKYQKAVSFHYADAKNLVAMANQLTNKDYQKVIKSSTALTKEKAFFDACVAAT
KDSGHNNQILISNNYLMKRVRKLADYLGAEFTYALGGRVERLPNKVQLANALGYLSFDQ
NIQTLVTPPLVDITYWPDPNKGYTMFLDQNTAYMSKTFYHPDAFKTIKENYINSATKVIET
FVKTQNKPIDPKLKDKVRGLVEFEQMIANKYSTDDDTTRIYLRSWNLRSIRELQNQFGF
VDWQTYMKMVPMAQNKVQSADFRVSVMEPGQYANMSRDYAGFDKEKLVNYLFMRLLLS
NAQYLPITYASSFKEMPEEPLVLGRKRRNIHFSKSDTLTDTQANCAKVANELMMFANGRV
FVDYVYPDEKYKDLIRSSAGGVMHNVIAHAFQSMVDQLDWMSEATKRKAIEKSMNIITNI
AFPDWIMDNAKLDLYKSITFDPTKENYYDIWTKLTIFNIEAQYKHLTMATADYEEFLM
PPGIVNAWYQPELNTITFPAGILRPYPFHPDWPASIKYGGIGLIAGHELIHGFDDQGVQ
WGPKGHISYPEKNCIGWMDEQSTKGFNRLAQCVIDEYSTFCPLDNRTYTPNCVNQAQTQ
GENIADNGGVHAAFRAYRTHISLNGPDPQLPDRLFQGFTHDQLFFLNFAQVWCEKRRVD
DRLYQQLMVDPHSPAMYRVFGTLQNYPAFRAAFNCPLNSRYAPKDHCVWVPNYMP*

Figure 70B

ACAGATGAGATCTCTTTGCCTGCTGCTCGCTGTGGTGCTTGTCGCCGTCCACGCAAAAA
TGCAGAACGTCAACGTCAAGGGGACCACCATCTGCAACAAGAAGCGAATGGCCGATGTG
ACGGTGGAAGTGTGGGAGAGAGACACCCTCGACCCCAACGACCTCCTCGACTCCAAGAA
GACCTCTAGGGAAGGCGAGTTCCTCGGGAAAGGTGGTCAGAACGAAGTCGGCTCGATTG
AGCCATTCTTCAAAATTACACACACCTGCAATGTCAAGAAACCGGGCTGCAAGAGAATC
ACTGAGTTCGACATCCCGAAGTCGAAGATCGACACGGTCTACGACATGACCTACGTGAC
GCTGGATATCATTTCCGCAGTCGATAAGGAGAAGTGCTACATGAACGCGTTGTTTTCCA
CGGCAATATTTTGTATAGACAGATGAACATTCCTTCCGAAAAAAAAAAAAAAAAAAAAA

Figure 71A

MRSCLLLAVVLVAVHAKMQNVTVKGTTICNKKRMADVTVELWERDTLDPNDLLDSKKT
SREGFLGKGGQNEVGSIEPFLKITHTCNVKKPGCKRITEFDIPKSKIDTVYDMTYVTL
DIISAVDKEKCYMNALFSTAIFCIDR*

Figure 71B

AGTGCCATTGCCGAGGGATGGCTCGCCTTGTACTGTTACTCGCACTATTTACCCTGGCT
GTGGCCAGCGTCCACAGGAGGACATTCCACCAGCCGCGTCGTTACGTGAAGTCGGTGTC
GCTTTCGCGTCAACCAACACTTCGTGAACGATTGCTGGGAACTGGCAGTTGGGAGGACT
ACCAGAAGCAACGCTATCACTACCAGAAGAACTTCTGGCAAAATATGCGGCAACAAG
GCGTCGAAACTACAGTCCACCAATGAGATTGACGAGCTCCTTCGTAACATATGATGTC
ACAATATTTCCGACCATCCAAATCGGAATCCAGCGCAGAATTTACAGTGATTTTCG
ACACCGGTTTCATCCAACCTCTGGGTGCCGTCCAGGAAATGCCCATTTCTACGACATCGCG
TGCATGCTTCACCACCGCTACGATTCTGGAGCATCGTCAACGTACAAGGAGGATGGACG
TAAGATGGCTATTCAATATGGAATGGCTCAATGAAGGGCTTCATTTCTAAGGATAATG
TCTGCATCGCCGGAATTTGTGCTGTGAGCAACCGTTTCCGAGGCAACGAGCGAGCCA
GGCCTCACGTTTCATCGCTGCGAAGTTCGACGGAATCCTTGGCATGGCCTTCCCTGAAAT
CTCCGTTCTCGGTGTACCACCAGTATTCCACACGTTTCATTGAACAGAAGAAAGTGCCGA
GCCCCGGTGTTCGCTTTCTGGCTCAACAGAAATCCCGACTCGGAATCGGAGGGGAGATC
ACCCTCGGTGGAATGGACCCCCGCCGATATGTTGAGCCGATCACATGGACCCCAGTAAC
TCGACGAGGATATTGGCAGTTCAAGATGGACAAGGTTCAAGGAGGATCAACGTCCATTG
CCTGCCCCAACGGATGCCAGGCTATCGCTGACACTGGTACTTCACTGATTGCCGGACCT
AAGGCTCAAGTTGAGGCTATCCAGAAATTCATTGGTGCTGAGCCACTTATGAAGGGAGA
GTACATGATTCCTTGCAGACAAGGTGCCTTCCCTCCCGAGCTGTCCTTCGTTATCGAGG
GCCGGACTTTCATCCTCAAGGGTGAAGATTACGTATTGACCGTGAAAGCTGGTGTTAA
TCGATCTGCCTGTCCGGTTTCATGGGAATGGACTTCCCGGAGAGGATCGGAGAGCTGTG
GATTCTTGAGACGTCTTCATTGGAAAGTACTACACTGTCTTCGATATTGGCCAAGCTC
GTCTTGATTTGCTCAGGCTAAGTCAGAAGATGGCTATCCGGTTGGTCTGCTGTTTGA
AGGTACAACAAGTTCTCGGAGGACAGCGACAGTGACGAGGATGATGTATTCACTCTCTA
AATAACATGTATCCACAATTTGCTCTAATCTCGATACGTGTACCGTGTCTCACGTGTTT
CCACTTTTGATAAACTGATTATTCTG

Figure 72A

MARLVLLLLALFTLAVASVHRRTFHQPRRYVKSVSLSRQPTLRERLLGTGSWEDYQKQRY
HYQKLLAKYAANKASKLQSTNEIDELLRNYMDAQYFGTIQIGTPAQNFTVIFDTGSSN
LWVPSRKCPFYDIACMLHHRYDSGASSTYKEDGRKMAIQYGTGSMKGFISKDNVCIAGI
CAVEQPFAEATSEPGLTFIAAKFDGILGMAFPEISVLGVPPVFHTFIEQKKVPSPVFAF
WLNRPDSELGGEITLGGMDPRRYVEPITWTPVTRRGYWQFKMDKVQGGSTSIACPNGC
QAIADTGTSLIAGPKAQVEAIQKFIGAEPLMKGEYMIPCDKVPSLPELSFVIEGRFIL
KGEDYVLTVKAGGKSICLSGFMGMDFPERIGELWILGDVFIGKYYTVFDIGQARLGFAQ
AKSEDPVPGPAVRRYNKFSSEDSDEDDVFTL*

Figure 72B

GGTACTGCAGGGTTTAATTACCCAAGTTTGAGGAGCATGCCATACCTCGCATT
CATTGTTCGCACTACTAGCCTGCACTGTTATGTCTGGTCACGGTCAAATGACGG
GTGGATTAACGAAGCAGGACCCCAATGATCCTGAGCACATGGCGAGAGCATG
GAAGGCGGCGAAAGGTATCAATGAGGATGCATCCAACGCTGGACCGTACCA
CATGATTCCCATTAAAGATTGTCAAGGCTGAATCTCAAGTCGTGGCTGGGGTTA
GATACATATTTGAAGTATTGTTTCGGCGAATCAACATGTAAGAAAGGACATAT
GGCTGCAACAGAGCTTTCTGCCTCCAACTGTGAACTAAAAGAAGGAGGAAAC
CGAGCTCTGTATAAAGTGGAGCTCTGGGAGAAGCCATGGGAGAAGCTTTGAGC
AGTTCAATGTTGAGAAGATCCGAAATGTTGCTGCTGGCGAGCAAATCTAACC
TGCTTCTTTAAGACACCTCACTGAATATTGAATATTTTGTATGTCATGTATAAT
ACGACGCGATTTTTTTTATCTCACGTACTTTTTTCACTGTGACAATTGCCTTCT
CTGC

Figure 73A

MPYLAFIVALLACTVMSGHGQMTGGLTKQDPNDPEHMARAWKAAKGINEDAS
NAGPYHMIPIKIVKAESQVVAGVRYIFEVLFGESTCKKKGHMAATELSASNCELKE
GGNRALYKVELWEKPWENFEQFNVEKIRNVAAGEQI*

Figure 73B

GAAAAGCCTCCATAGTCATGCTCAAGCTCGTTGCACTCGTTTGCCTGGTTGCA
ATCTGCTTCGCTCAGGGACCACAAGGACCCCTCCGTTCCCTGCAAAGTGCTCC
AGCGGCTGTTCAACAAGACTTCGACAAGCTCTTCGTCAATGCTGGCTCCAAG
ACTGATGCAGAAATCGACAAAATGGTCCAAGATTGGGTTGGCAAACAAGATG
CATCCATCAAGACCGCATTCGATGCGTTCGTGAAGGAAGTGAAAGCCGCTCA
AGCGCAAGGTGAAGCTGCCCATCAGGCTGCTATCGCCAAGTTCAGCGCAGAG
GCCAAAGCGGCTGATGCCAAGCTGAGCGCAATTGCGAACGACAGGTCTGAAG
ACAAACGCGCAAAAGGGAGCTGAGATCGACTCGGTACTCAAGGGACTTCCTC
CAAATGTCCGCACAGAGATCGAAAACGCCATGAAAGGATAAGAAGTCTCTAT
TTTGTATATATGAACCGATAAATATGCACAATAAAAAAAAAAAAAAAAAAAAA
AAAAAAA

Figure 74A

MLKLVALVCLVAICFAQGPQGPPPFLLQSAPAAVQQDFDKLFVNAGSKTDAEIDK
MVQDWVGKQDASIKTAFDAFVKEVKAAQAQGEAAHQAAIAKFSAEAKAADAK
LSAIANDRSKTNAQKGAEIDSVLKGLPPNVRTEIENAMKG*

Figure 74B

GAAAGGTTTAATTACCCAAGTTTGAGGATGAAGATTGCCCTGGTTGTTCTGCTGTTAGT
CGCCTACGCAAATTCTGCGGACATCTTCAGAACTGAATTTGGAGCTAAAATAAAAGCAG
AGGCGGATAAAAAGTAAGACGAACTAAATATCTCCTCTCTTCTTCAAGTCCGTGGGAAA
TTCCTCAAGTTAAGACAACAGATCAAGGAGAGCTTAGCTCTGACCCCGGAACGAAAAGA
GTTGTTGCATAAGTTGATGCAGAAATTAGTACACATCAAAAAGGATCATGTTTCATAAGG
GTGGTGA CTCAATCGATGAAATCAATAAGAAGGTTGGAATGTCAGATCTGCTCTACGAT
GGTGATATGGTTCTAACGAAAGAGCAAGCCGAGGAAATGGTTAGCGATATCGACGGAAG
TGGAAGCAACCGTGCAAAGCGTCAAGCGTATCGTAACAACTTTATCCGAAAACACTTT
GGACCGATGGAGTTATCTATTATTTCCATCCTAGTGCAACGAATAGCATGCGAAGTGTG
TTCCTGAAAGCAGCAAAGAATGGAGCTCTCAAACGTGTATCGATTTCCATGAGGATGT
GGTTGGAATGGGCCCCAACAGGATCAAGGTTTTCAAAGAGAAAGGTTGTTGGTTCGATGG
TTGGACGACTCCCTCGTCCACAGGAGCTTTCGTTGGGAAGAGGATGTGATACGATTGCC
ACAGCACAACACGAGATCGGCCATGCGCTGGGATTCTTCCACCAGCAGGCTAGACACGA
TCGCGATGACTACATTGTATTTAATTCAGAGAATGTAGTGCCGCGATATCTGGATCAAT
TCAAGAAACAGAGCAAAGAAACAACGATAATTACGGATTAACCTATGATTACGGAAGC
ACCATGCAGTACGGATCGACCAGCGGATCCCAAATGGAAAACCTACAATGGTGCCAAA
AGATCCTAAATATATAGAAACCCTGGGATCACCTTTCATTGCATTCTACGATTTACTGG
CAATAAATACGCACTACAAATGTCTTGAGAAATGCGATAATAATGGGGCACAAATGCAAA
ATGGGTGGATTCCCTAATCCAAGAGATTGCTCAAAATGCATTTGTCCCAGTGGATACGG
TGGCGCTACATGTGACCAGAAACCTGAAGGATGTGGTGAAGTACTTGAAGCAACGAAGG
AGGCTAAACCCCTCAAAGTGAAATTGGAGATAAAAGTGCAGGAGATGAGGACAGAGAG
GACATGACCAAGTGTTACTATTGGATCAAGGCACCGGAAGGATCGAAAGTTGAGGTTAA
GATCGTAAACCTAGCTAAAGGTCTTGCCATTGATGGATGCAGATATTGGGGTGTGGAAA
TAAAACTCAGGAGGATCAACGTGCTTCCGGATACAGATTCTGCGCTCCCGAAGATGCT
GGCGTCACTTTGGAGTCGCACTCGAATATTGTCCCTATAATAGCGTTCAATAGACACGG
CTCTACTGAATTTGAATTACAGTACCGAATCGTATAATTCTGCGTGACCAACGCTTCTC
CTAAGAGACGAGAAAGTTCTGCAACAATACTTTATTTCATGTATAACAATATAGGAGAGT
TTTTCTTAGTAGAAGTACTTTCTTTGTTGGTTCTCCAGAAATAAACGATTTCCATGCAA
AAAAAAAAAAAAAAAAAAAAA

Figure 75A

MKIALVLLLLVAYANSADIFRTEFGAKIKAEADKSKTKLNISSLLQVRGKFLKLRQQIK
ESLALTPERKELLHKLMQKLVHIKKDHVHKGGDSIDEINKKVGMSDLLYDGDMLTKEQ
AEEMVSDIDGSGSNRAKRQAYRNKLYPKTLWTDGVIYYFHPSATNSMRSVFLKAAKEWS
SQT CIDFHEDVVGMPNRIKVFKEKGCWSMVGRLPRPQELSLGRGCDTIATAQHEIGHA
LGFFHQARHDRDDYIVFNSENVVPYLDQFKKQSKETNDNYGLTYDYGSTMQYGSTSG
SQNGKPTMVPKDPKYIETLGSPFIAFYDLLAINTHYKLEKCDNNGAQCKMGGFPNPRD
CSKCICPSGYGGATCDQKPEGCGEVLEATKEAKTLKSEIGDKSAGDEDREDMTKCYWI
KAPEGSKVEVKIVNLAKGLAIDGCRYWGV EIKTQEDQRASGYRFCAPEDAGVTLESHSN
IVPIIAFNRHGSTEFELQYRIV*

Figure 75B

ACTTCAAGCGATGTTCCGTCCTGCTACTGCCGTCCTTCTATTGTTGGCCGCGTCCAGCA
CATTTGCTGGATTTTTTCGATGATGTTGGAGGCTTACCCAGTGGTGTGGGAGATTTTTTC
ACAAAGCAGTTCAACAATGTGAAGGATCTTTTTGCTAAAGATCAAGATACTCTTGAGAA
GAATATCAATCTGGTAAAGGATCTATTGATTGCCATTAAGGAGAAGGCTAAGATGCTGG
AACCGATGGCCAACGAGGCTCAGAAGAAGACATTAGGGCAGGTGGACAACCTATCTCAAT
GAAGTTCAACAGTTCGGCGATCAGGTAGCCAAGGAGGGTTCTACGAAATTTGAGGAGAA
CAAAGGGAAATGGCAGCAAATGTTGAACGATATCTTCGAGAAAGGTGGACTGGACAGCG
TGATGAAGTTGCTCAATCTGAAGTCCGGCGGTCGCTGCACGTTAGCCGCTGCACTCGTC
GCTCCCGTTGTGCTCGCGCTCATCCGCTAATTTCACTTCTACCGCCGCCGACTACTGTAG
TTTACCCTGTGCCTGTGTGTGATATGTGGATTTGTGCATGATGTGTATCTATGATTTGT
GATTTATTTTTCTCTTGTACTTCCATGAATTCAGCTCTGGTATTCTGAGACGGACCAAC
ATCTCCGCAGTACTTTTTTGTATTGTTATCATCACCGTAATCCTGTGACTGGCGTAAAA
TGTTTAGTTTTCCGATAAAAATACATTTCGAAAAAa

Figure 76A

MFRPATAVLLLLAASSTFAGFFDDVGGLPSGVGDFFTKQFNNVKDLFAKDQDTLEKNIN
LVKDLLIAIKEKAKMLEPMANEAQKKT LGQVDNYLNEVQQFGDQVAKEGSTKFEENKGK
WQQMLNDIFEKGLDSVMKLLNLKSGGRCTLAAALVAPVVLALIR*

Figure 76B

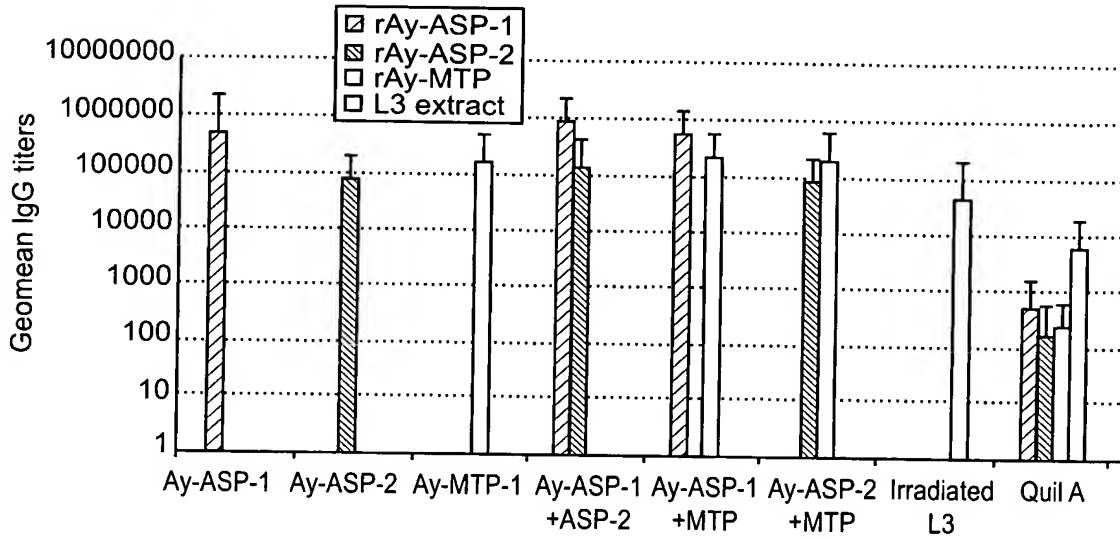


Figure 77A

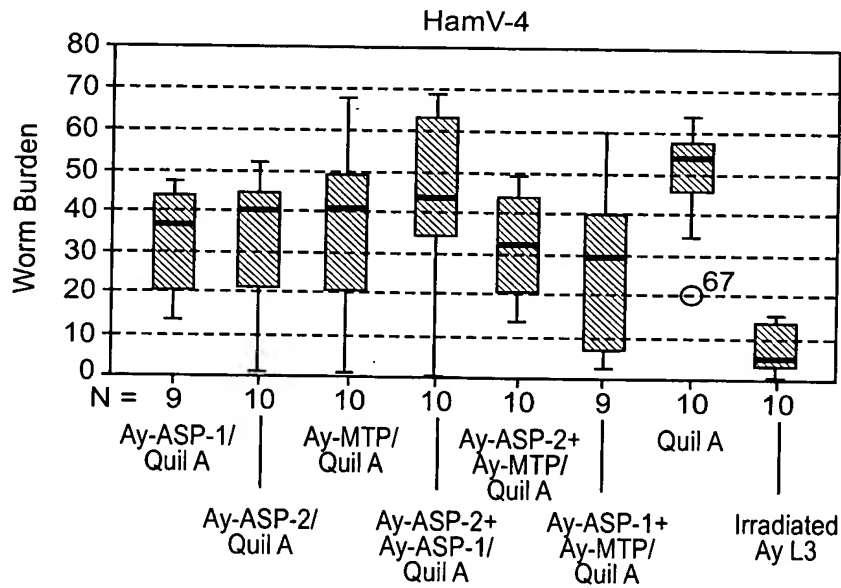


Figure 77B

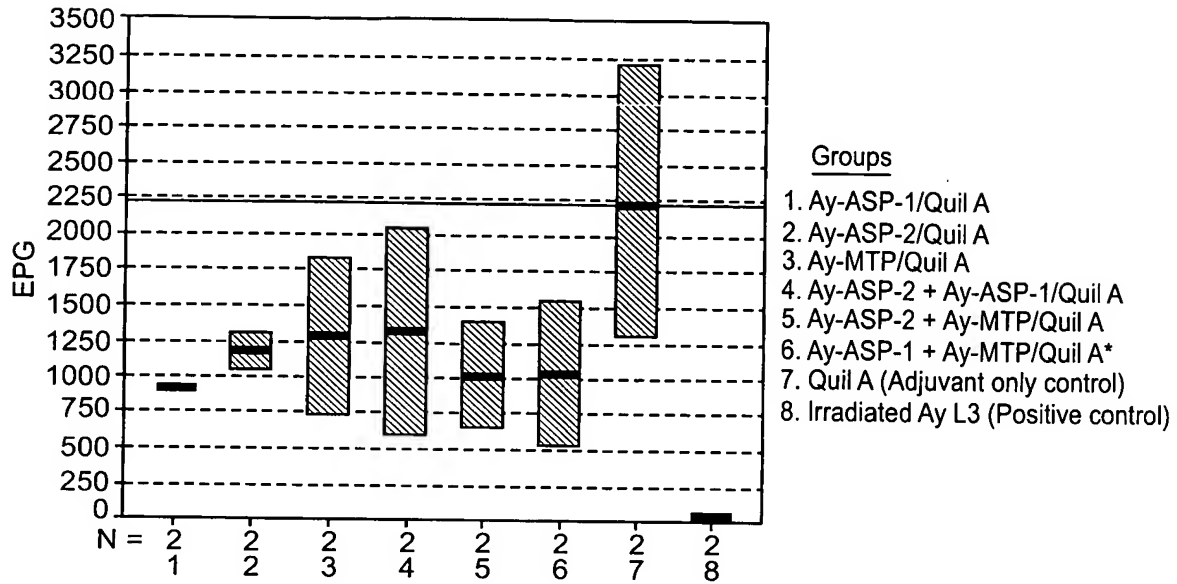


Figure 78A

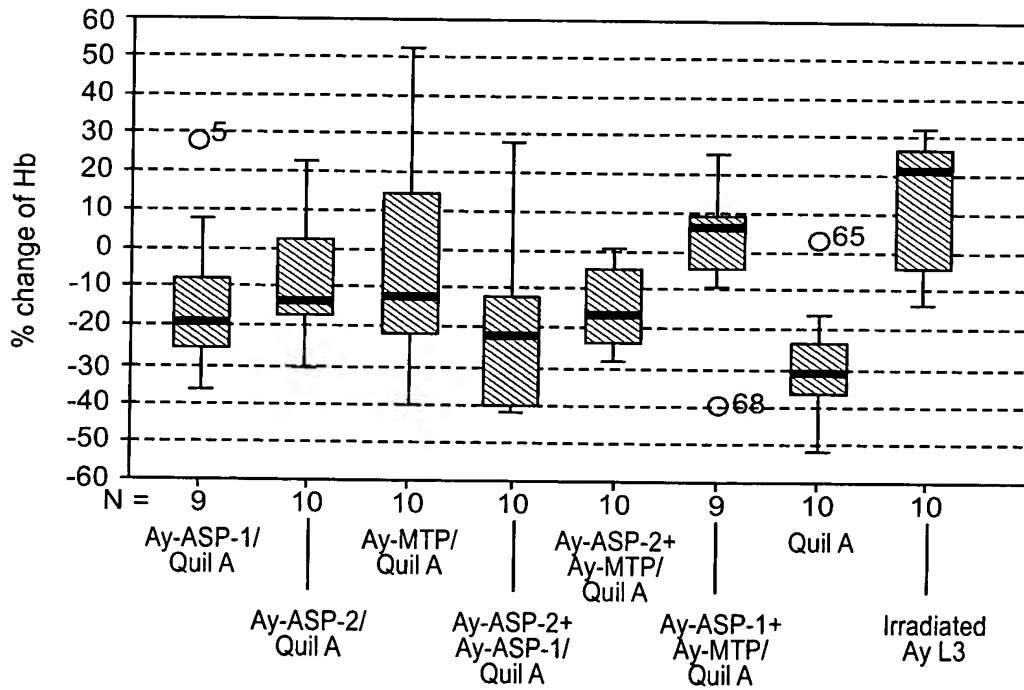


Figure 78B

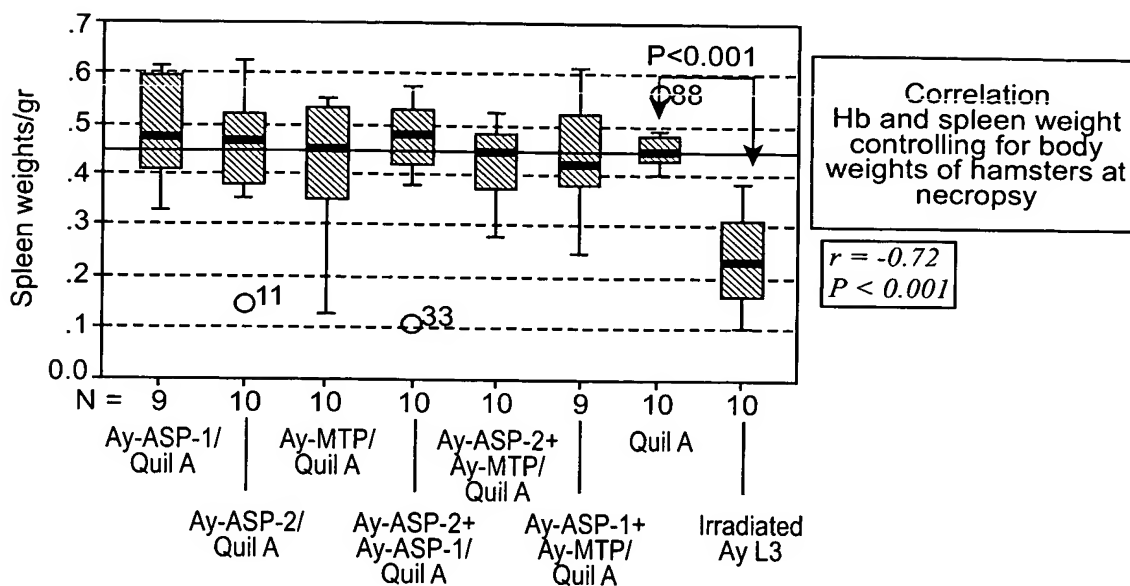


Figure 79A

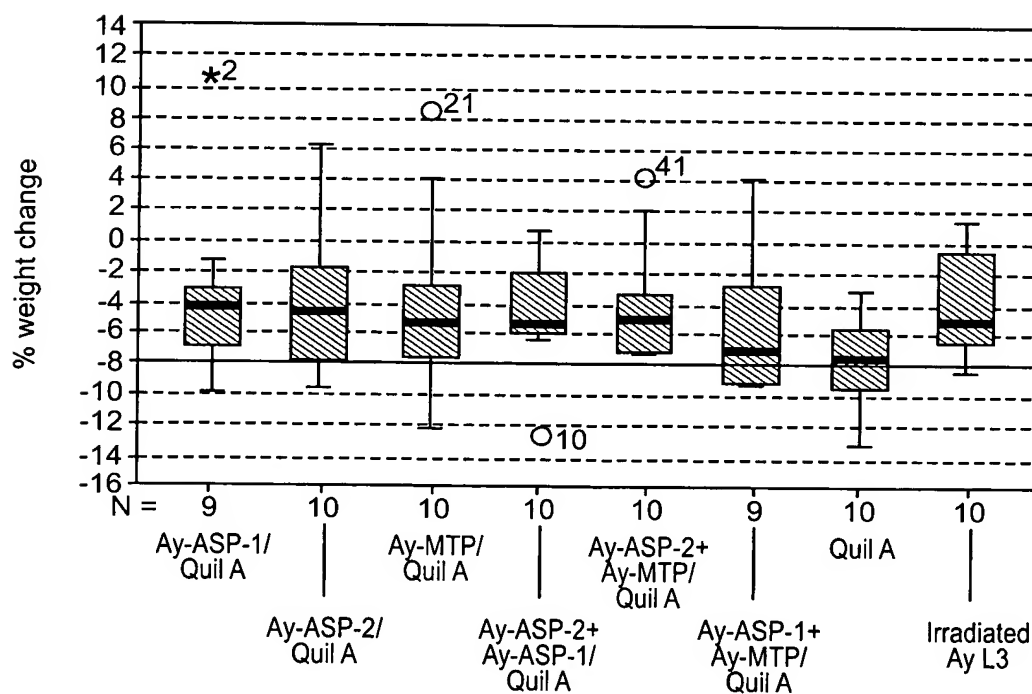


Figure 79B

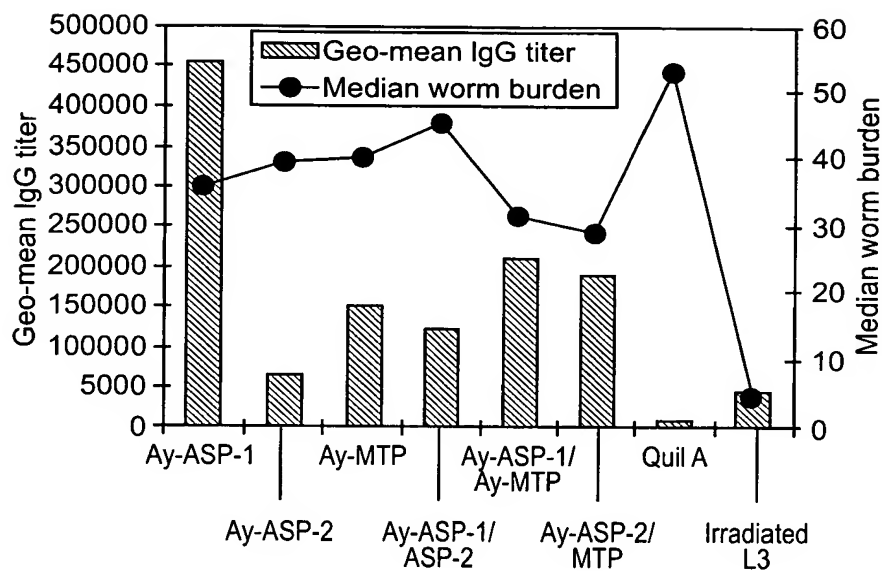


Figure 80A

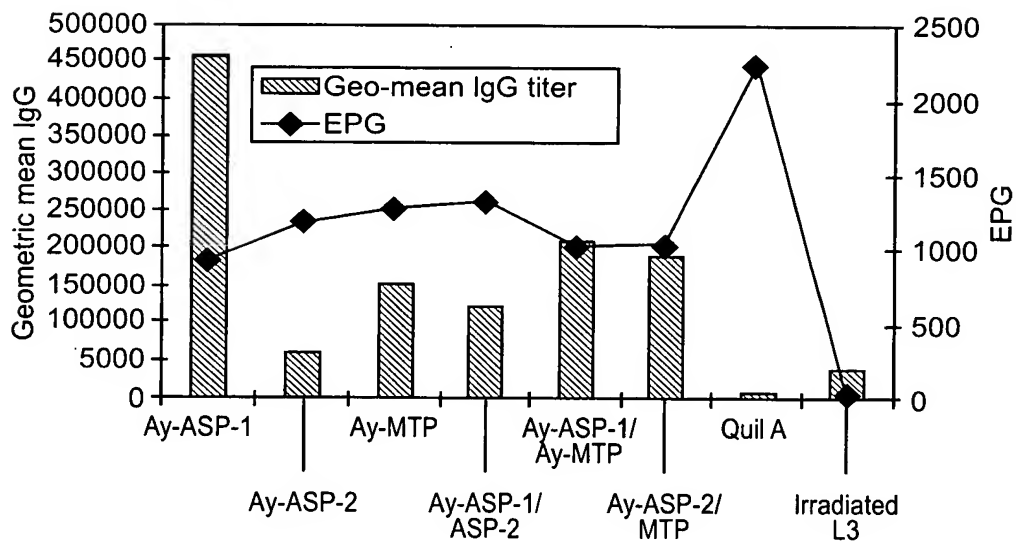


Figure 80B